



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

September 18, 2012

Mr. Jeffrey Eandi
Eandi Metal Works
976 Twenty Third Avenue
Oakland, CA 94606
(Sent via E-mail to: mail@eandimetals.com)

Subject: Case Closure for Fuel Leak Case No. RO0000029 and GeoTracker Global ID T0600100858, Eandi Metal Works, 2440 East Eleventh Street, Oakland, CA 94606

Dear Mr. Eandi:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (<http://geotracker.swrcb.ca.gov>) and the Alameda County Environmental Health website (<http://www.acgov.org/aceh/index.htm>).

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- Total petroleum hydrocarbons as gasoline remains in soil at concentrations up to 45 ppm.
- Total petroleum hydrocarbons as gasoline remains in groundwater at concentrations up to 3,000 ppb.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

Donna L. Drogos, P.E.
Division Chief

A handwritten signature in blue ink, appearing to read "Donna L. Drogos". The signature is fluid and cursive.

Enclosures:

1. Remedial Action Completion Certification
2. Case Closure Summary

cc:

Leroy Griffin (w/enc)
Oakland Fire Department
250 Frank H. Ogawa Plaza, Ste. 3341
Oakland, CA 94612-2032
(Sent via E-mail to: lgriffin@oaklandnet.com)

Closure Unit
State Water Resources Control Board
UST Cleanup Fund
P.O. Box 944212
Sacramento, CA 94244-2120
(uploaded to GeoTracker)

Douglas Lovell)
Streamborn
P.O. Box 8330
Berkeley, CA 94707-8330
(Sent via E-mail to: doug@streamborn.com)

Donna Drogos, ACEH (Sent via E-mail to: donna.drogos@acgov.org)
Jerry Wickham, ACEH (Sent via E-mail to: jerry.wickham@acgov.org)

GeoTracker (w/enc)
eFile (w/orig enc)

ALAMEDA COUNTY
**HEALTH CARE SERVICES
AGENCY**

ALEX BRISCOE, Director



DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

September 18, 2012

Mr. Jeffrey Eandi
Eandi Metal Works
976 Twenty Third Avenue
Oakland, CA 94606
(Sent via E-mail to: mail@eandimetals.com)

Subject: Case Closure for Fuel Leak Case No. RO0000029 and GeoTracker Global ID T0600100858, Eandi Metal Works, 2440 East Eleventh Street, Oakland, CA 94606

Dear Mr. Eandi:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,


Ariu Len
Director

**CASE CLOSURE SUMMARY
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

I. AGENCY INFORMATION

Date: November 4, 2011

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Mr. Jerry Wickham	Title: Senior Hazardous Materials Specialist

II. CASE INFORMATION

Site Facility Name: Eandi Metal Works Inc.		
Site Facility Address: 2440 East Eleventh Street, Oakland, CA 94606		
RB Case No.: ---	STID No.: STID 34	LOP Case No.: RO0000029
URF Filing Dates: 05/04/93	Geotracker ID: T0600100858	APN: 19-98-5-6

Responsible Parties	Addresses	Phone Numbers
Mr. Jeffrey Eandi Eandi Metal Works	976 Twenty Third Avenue Oakland, CA 94606	No phone number

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
1	1,000	Gasoline	Removed	5/11/1992
2	550	Gasoline	Removed	5/11/1992
3	1,000	Diesel	Removed	5/11/1992
Piping			Removed	05/11/1992

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Unknown. Although some rust and corrosion was observed, no holes, cracks, or other signs of failure were observed in the tanks during removal.		
Site characterization complete? Yes	Date Approved By Oversight Agency: -----	
Monitoring wells installed? Yes	Number: 5	Proper screened interval? ---
Highest GW Depth Below Ground Surface: 8.14 feet bgs	Lowest Depth: 16.0 feet bgs	Flow Direction: Southwest
Most Sensitive Current Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: The nearest water supply well is approximately 1,270 feet upgradient (northeast) of the site. The well, which is 681 feet deep, may or may not still be in service. Based on the distance and upgradient location, the water supply well is not expected to be a receptor for the site. No other water supply wells are within 2,000 feet of the site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest SW Name: The Oakland-Alameda Estuary is approximately 2,200 southwest of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health and Oakland Fire Department

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	3 tanks	The tanks were transported to Erickson, Inc. in Richmond, CA for disposal.	05/11/1992
Piping	Not reported	Piping was transported to Erickson, Inc. in Richmond, CA for disposal	05/11/1992
Free Product	----	----	----
Soil	Approximately 35 cubic yards	Soil from the tank pit excavation was allowed to aerate for nine months and was then placed back in the tank pit excavation	03/1993
	Approximately 40 cubic yards	The tank pit was completely re-excavated in September 2004. The removed soil was air dried and then replaced in the excavation using a compactor	09/23/2004
Groundwater	---	---	----

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS BEFORE AND AFTER CLEANUP
 (Please see Attachments 1-6 for additional information on contaminant locations and concentrations)

Contaminant	Soil (ppm)		Water (ppb)	
	Before	After	Before	After
TPH (Gas)	1,100	45	22,000	3,000
TPH (Diesel)	130	<1	NA	NA
TPH (Kerosene)	<1	<1	NA	NA
Benzene	11	0.058	1,200	5.7
Toluene	64	0.15	2,000	2.1
Ethylbenzene	19	0.33	1,000	160
Xylenes	19	1.5	5,300	10
Heavy Metals (Cd, Cr, Pb, Ni, Zn)	15.6(1)	15.6(1)	153(2)	4.4(2)
MTBE	0.017(3)	<0.017(3)	760(4)	0.98(5)
Other (8240/8270)	NA	NA	NA	NA

Footnotes:

- (1) Lead = 15.6 ppm; no other metals analyzed.
- (2) Lead = 153 ppb; no other metals analyzed.
- (3) MTBE = 0.017 ppm; TBA, TAME, ETBE, DIPE, EDB, and EDC <0.005 to 0.01 ppm.
- (4) MTBE = 760 ppb; TAME = 0.53 ppb; TBA, ETBE, DIPE, EDB, and EDC <0.5 to 5.0 ppb.
- (5) MTBE = 0.98 ppbb; TBA, TAME, ETBE, DIPE, EDB, and EDC <0.5 to 5.0 ppb.

Site History and Description of Corrective Actions:

Three underground storage tanks (USTs) were removed from the Eandi Metal Works facility on May 11, 1992. Two of the USTs were located at the main portion of the Eandi Metal Works facility at 976 23rd Avenue and a 1,000-gallon gasoline UST was removed from the sidewalk area adjacent to the Eandi Metal Works building at 1440 East Eleventh Street. Soil samples collected adjacent to the two USTs removed from 976 23rd Avenue did not contain petroleum hydrocarbons at concentrations above reporting limits or contained low concentrations of petroleum hydrocarbons that were below applicable screening levels. Soil samples collected from the area of the 1,000-gallon UST at 1440 East Eleventh Street contained elevated concentrations of the TPHg and BTEX. Site investigation activities for this case have been focused on the former UST location at 1440 East Eleventh Street. Surrounding land use to 1440 East Eleventh Street is mixed commercial and residential.

Following the removal of the 1,000-gallon gasoline UST from the sidewalk area adjacent to 1440 East Eleventh Street in May 1992, the soil from the tank pit excavation was spread nearby and allowed to aerate for nine months. The soil was then placed back in the excavation and covered with steel trench plates. In June 2004, the tank pit was partially re-excavated to collect soil samples from the sidewalls and base of the former tank pit. Petroleum hydrocarbons and oxygenates were not detected at concentrations above reporting limits. The tank pit was completely re-excavated in September 2004. The removed soil was air dried and then replaced in the excavation using a compactor. The UST area was then repaved in September 2004.

In July 1995, five soil borings were advanced in the area of the former UST. Three of the borings were converted into monitoring wells (MW-1 through MW-3) and the remaining two borings (E-1 and E-2) were advanced to collect soil samples within the tank pit. Groundwater monitoring was conducted periodically from July 1995 to September 2010.

In August 2004, seven soil borings (B-1 through B-7) were advanced to depths of 20 to 32 feet bgs to collect soil and grab groundwater samples. The grab groundwater results indicated that a plume of dissolved petroleum hydrocarbons extended approximately 200 feet downgradient (southwest) from the tank pit area.

On September 28, 2006, two soil borings were advanced to a depth of 17 feet bgs for soil sampling and then were converted to monitoring wells (MW-4 and MW-5).

On September 8, 2011, soil gas samples were collected from three locations. Total petroleum hydrocarbons as gasoline were detected in each of the three soil gas samples at concentrations ranging from 20 to 55 ppb. Benzene, toluene, ethylbenzene, and xylenes were not detected at concentrations exceeding reporting limits.

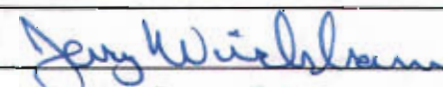
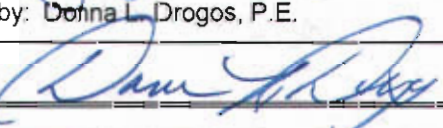
IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, it does not appear that the release would present a risk to human health based upon current land use and conditions.		
Site Management Requirements: None.		
Should corrective action be reviewed if land use changes? No		
Was a deed restriction or deed notification filed? No		Date Recorded: --
Monitoring Wells Decommissioned: No	Number Decommissioned: 0	Number Retained: 5
List Enforcement Actions Taken: Notice of Violation dated March 25, 1993, Second Notice of Violation dated August 3, 1994, and Final Notice of Violation dated January 4, 1995.		
List Enforcement Actions Rescinded: All		

V. ADDITIONAL COMMENTS, DATA, ETC.

<p>Considerations and/or Variances:</p> <p>None.</p> <p>Conclusion:</p> <p>Alameda County Environmental Health staff believe that the levels of residual contamination do not pose a significant threat to water resources, public health and safety, and the environment based upon the information available in our files to date. No further investigation or cleanup for the fuel leak case is necessary. ACEH staff recommend case closure for this fuel leak site.</p>

VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham	Title: Senior Hazardous Materials Specialist
Signature: 	Date: 02/21/12
Approved by: Donna L. Drogos, P.E.	Title: Chief
Signature: 	Date: 02/21/12

This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions.

VII. REGIONAL BOARD NOTIFICATION

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Notification Date: 02/21/12	

VIII. MONITORING WELL DECOMMISSIONING

Date Requested by ACEH: 02/21/12	Date of Well Decommissioning Report: 08/31/12	
All Monitoring Wells Decommissioned: Yes	Number Decommissioned: 5	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: <i>Jerry Wickham</i>		Date: 09/18/12

Attachments:

1. Vicinity Maps (2 pp)
2. Site Plans, Sampling Location Maps, and Cross Section (7 pp)
3. Chemical Results Maps (2 pp)
4. Soil and Soil Vapor Analytical Data (5 pp)
5. Groundwater Analytical Data (3 pp)
6. Boring Logs (26 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.

Wickham, Jerry, Env. Health

From: Cherie McCaulou [CMccaulou@waterboards.ca.gov]
Sent: Tuesday, February 21, 2012 3:40 PM
To: Wickham, Jerry, Env. Health
Subject: Re: Pending closure for 2440 East Eleventh Street, Oakland

Jerry - Thank you for notifying the Regional Water Board staff of ACEH's intent to close the case for 72440 East 11th Street in Oakland. We have no objection to the case closure. If you have any questions or comments, please contact me.

Sincerely,

Cherie McCaulou
Engineering Geologist
San Francisco Bay Regional Water Quality Control Board
cmccaulou@waterboards.ca.gov
510-622-2342

>>> "Wickham, Jerry, Env. Health" <jerry.wickham@acgov.org> 2/21/2012 2:21 PM >>>
Hi Cherie,

This email provides notification of pending closure for ACEH case RO0029, 2440 East Eleventh Street, Oakland.

Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
phone: 510-567-6791
jerry.wickham@acgov.org

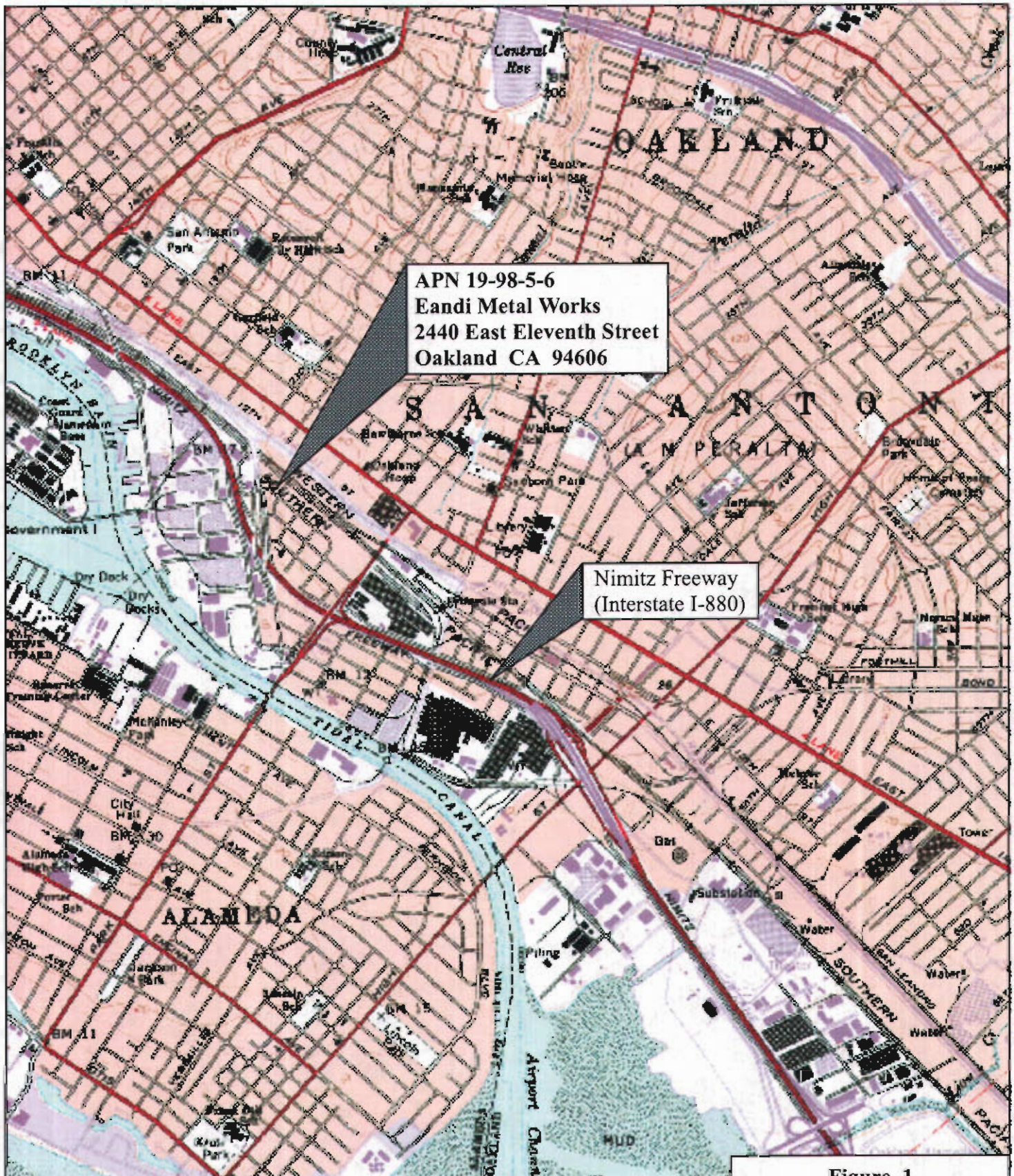


Figure 1

Location Map

2440 East Eleventh Street
Oakland CA

0 0.5 1.0

Approximate Scale in Miles

0 2,000 4,000

Approximate Scale in Feet



Basemap: U.S. Geological Survey, 7.5 Minute Quadrangle, Oakland East CA. 1959 (Photorevised 1980)



APN 19-98-5-6
Eandi Metal Works
2440 East Eleventh Street
Oakland CA 94606

Nimitz Freeway
(Interstate I-880)

Figure 2

Vicinity Map

2440 East Eleventh Street
Oakland CA



0 500 1,000



Approximate Scale in Feet

Basemap: Aerial photograph, flown 24 August 1998, photograph ALA-AV-6100-11-38. Pacific Aerial Surveys, Oakland CA.

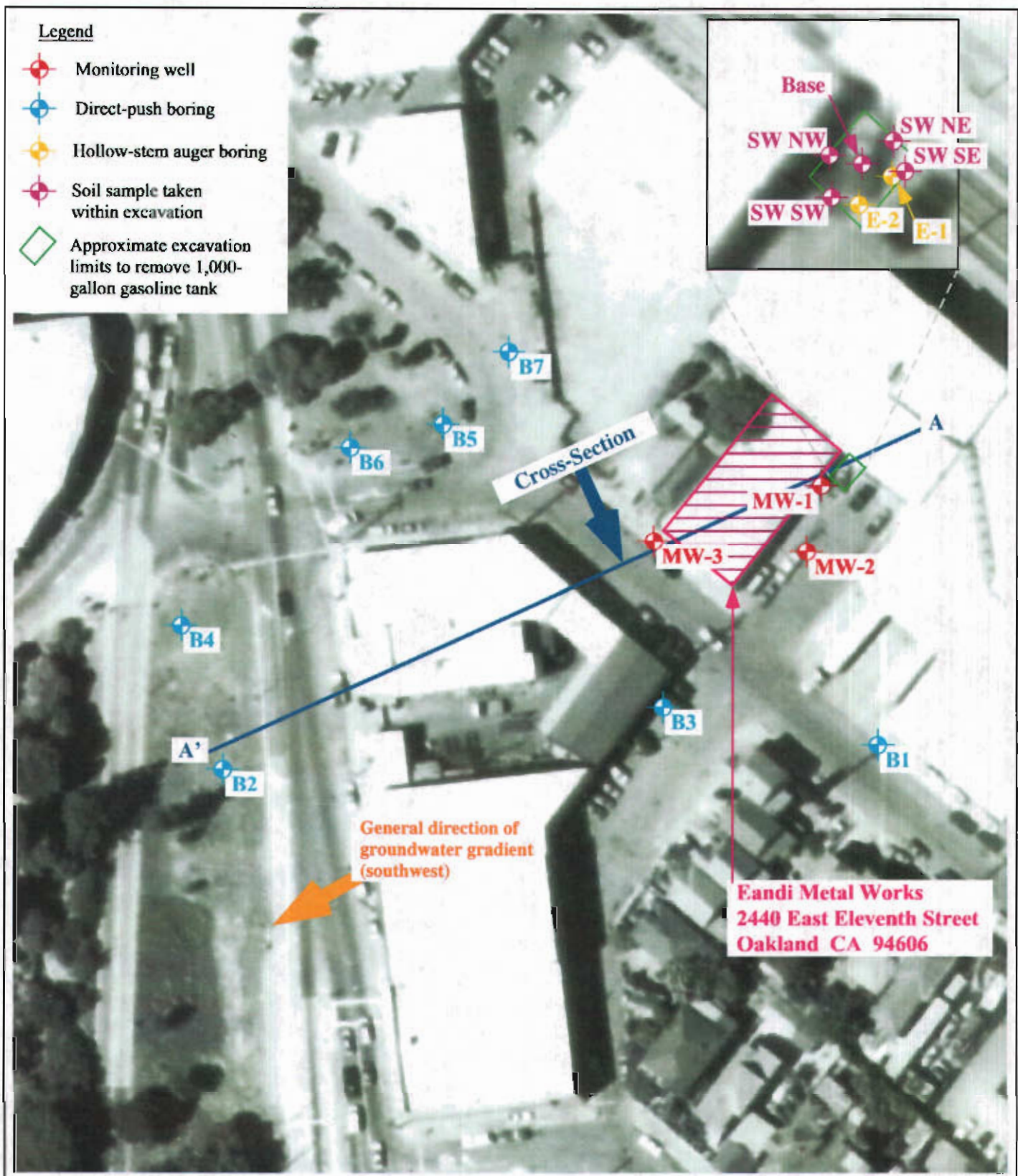
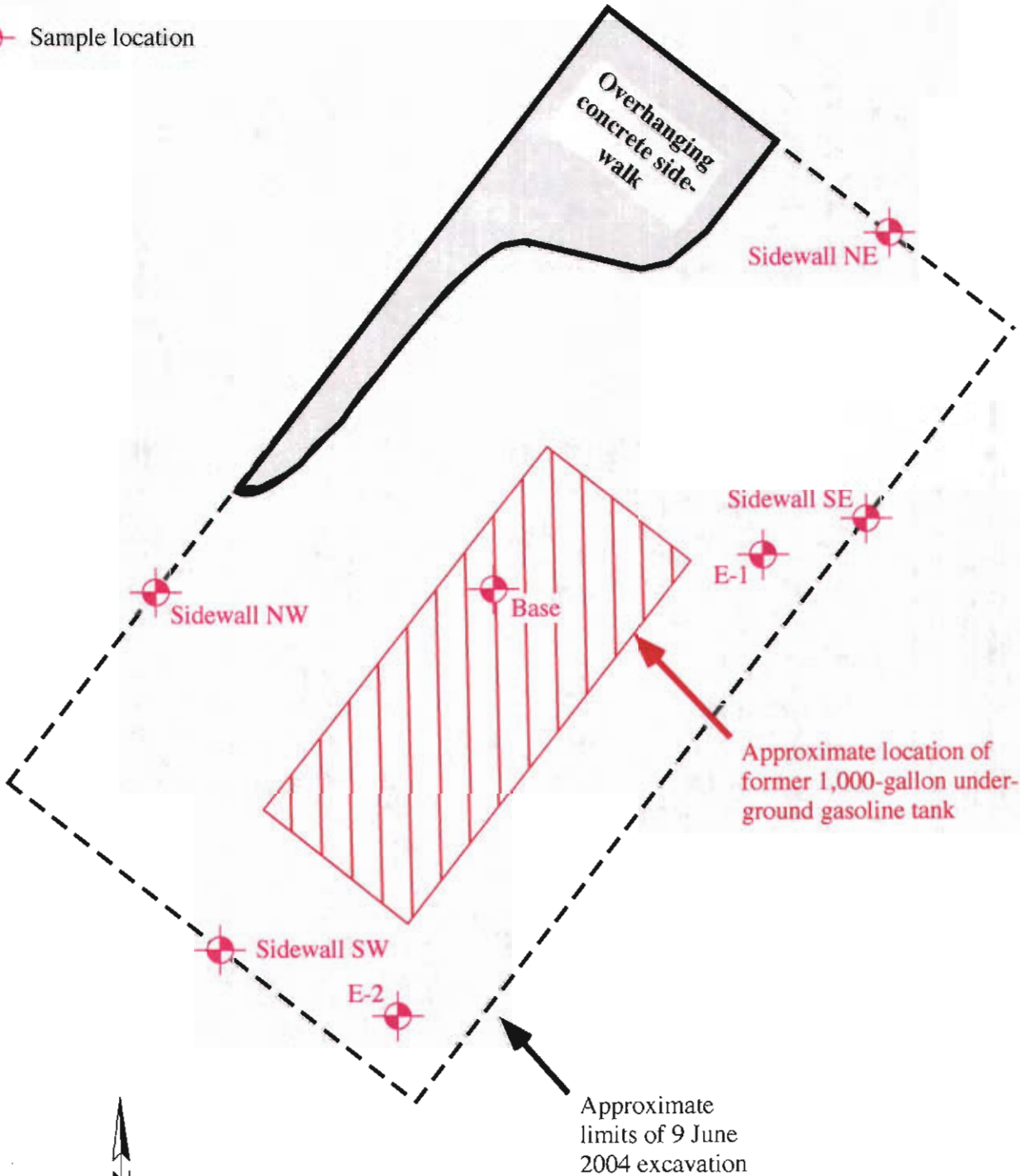


Figure 3
Site Plan
2440 East Eleventh Street
Oakland CA

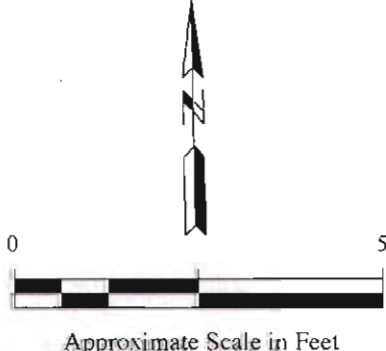
Legend

Sample location



Approximate location of former 1,000-gallon underground gasoline tank


Approximate limits of 9 June 2004 excavation



Note: This figure is based on field measurements made by Streamborn on 9 June 2004. The measurements should be considered approximate.

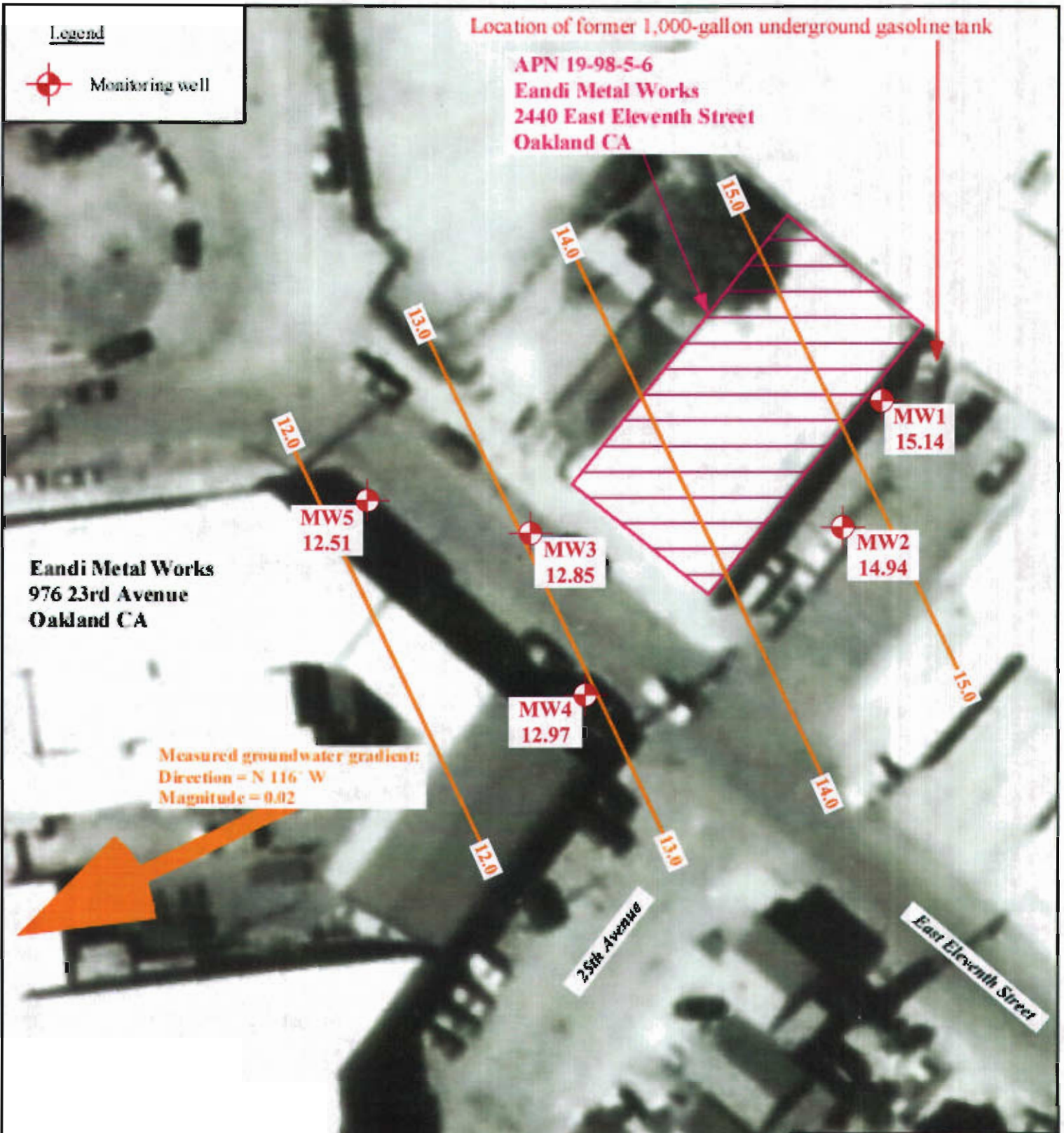
Figure 4
Excavation □
Sampling Locations
2440 East Eleventh Lane
Oakland CA

Legend

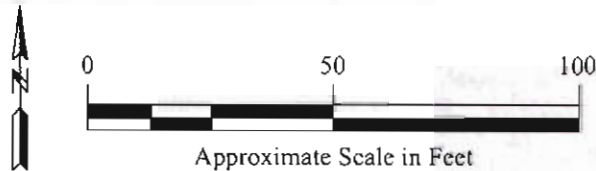
 Monitoring well

Location of former 1,000-gallon underground gasoline tank

APN 19-98-5-6
Eandi Metal Works
2440 East Eleventh Street
Oakland CA

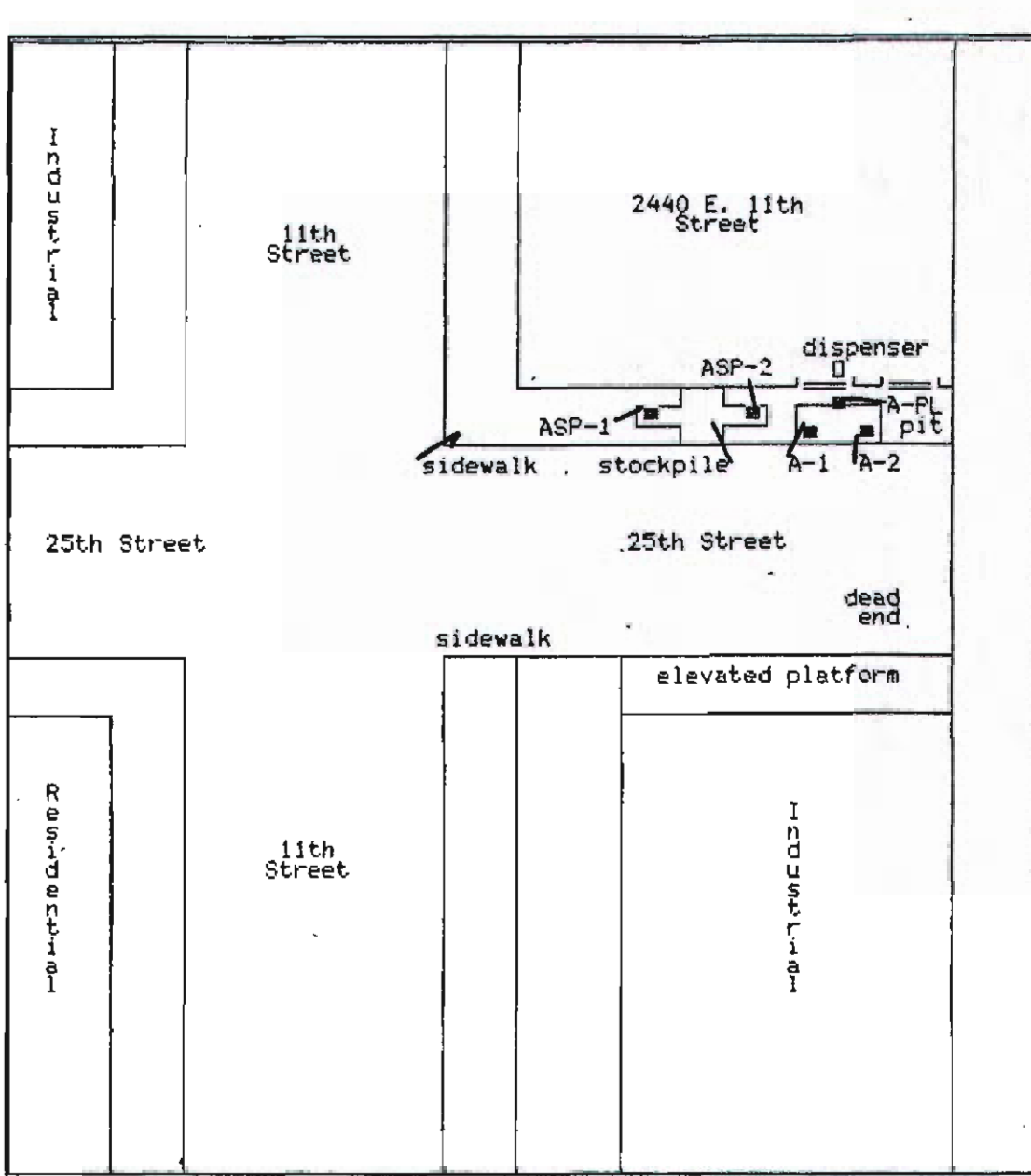


Note - Groundwater elevations cited in units of feet, referenced to the NAVD88 Datum (NOT Mean Sea Level)



Basemap: Aerial photograph, flown 24 August 1998, photograph number ALA-AV-6100-11-38, original scale 1:12,000. Pacific Aerial Surveys, Oakland CA

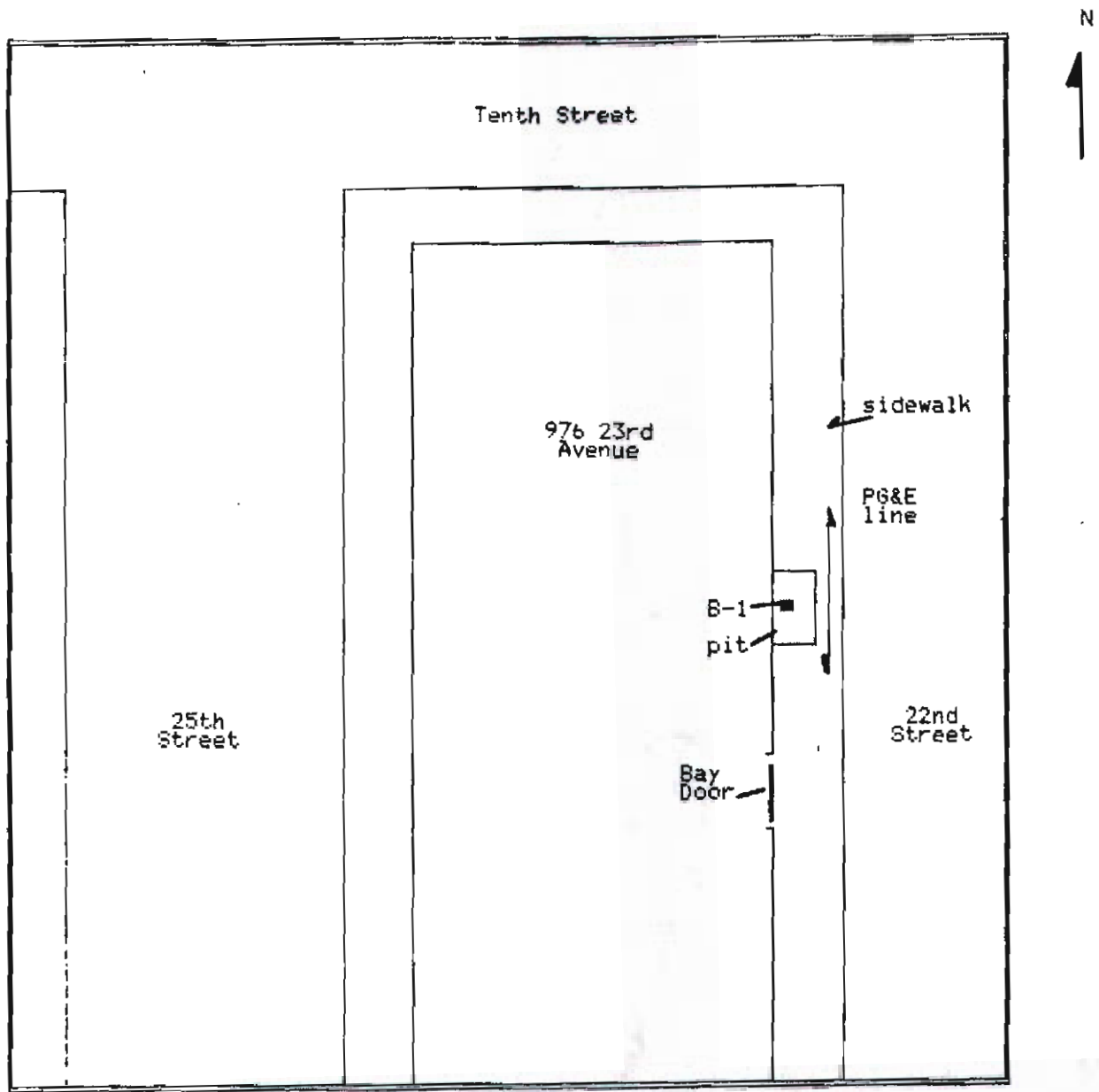
Figure 4
Groundwater Levels and Gradient
(8 March 2010)
2440 East Eleventh Street
Oakland CA



Scale: 1" = 30 feet

SAMPLE LOCATIONS OF 1,000-GALLON GASOLINE TANK

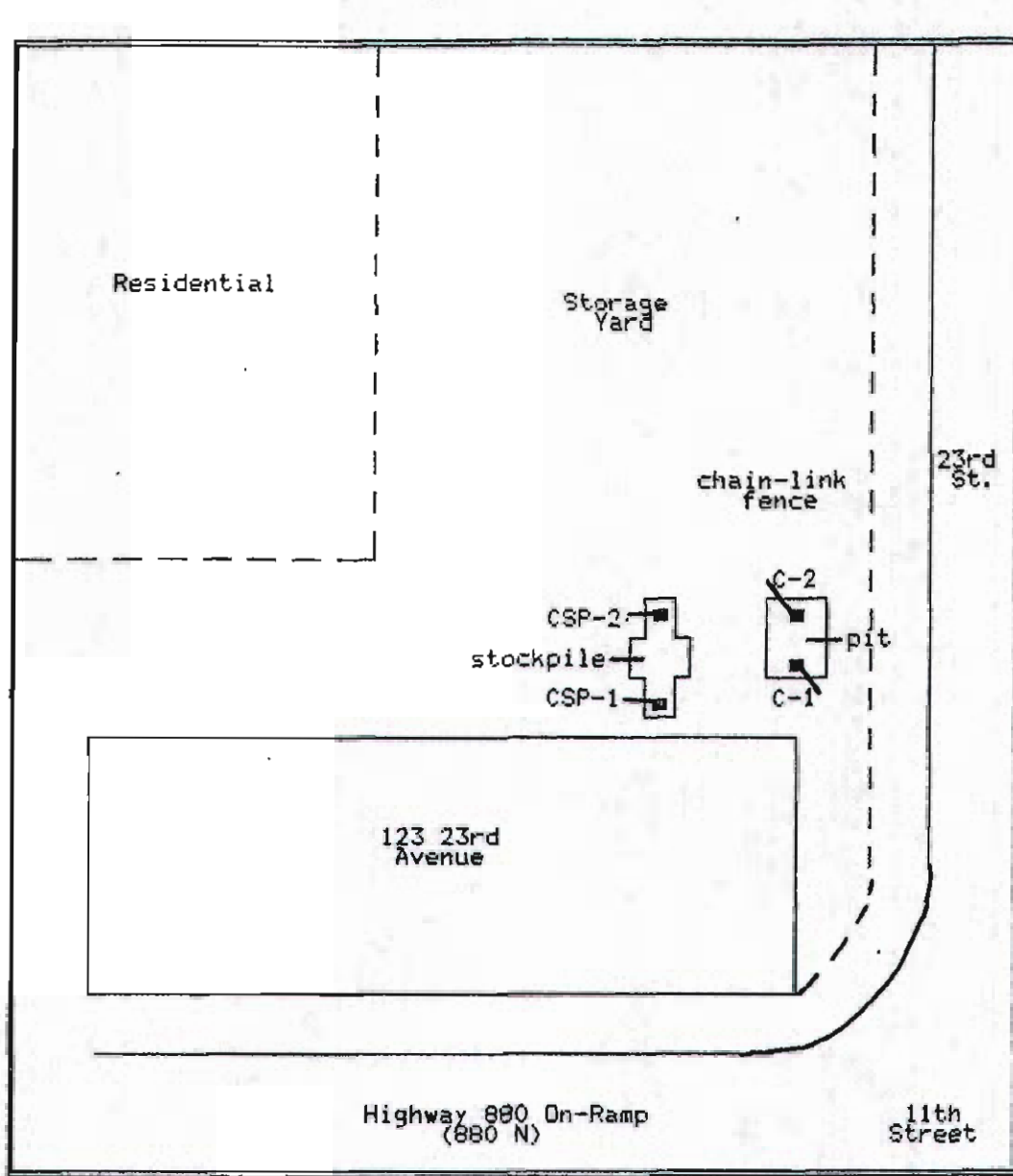
Figure 3A



Scale: 1" = 30 feet

SAMPLE LOCATIONS OF 550-GALLON GASOLINE TANK

Figure 3B



Scale: 1" = 30 feet

LOCATION OF 1,000-GALLON DIESEL TANK

Figure 2C

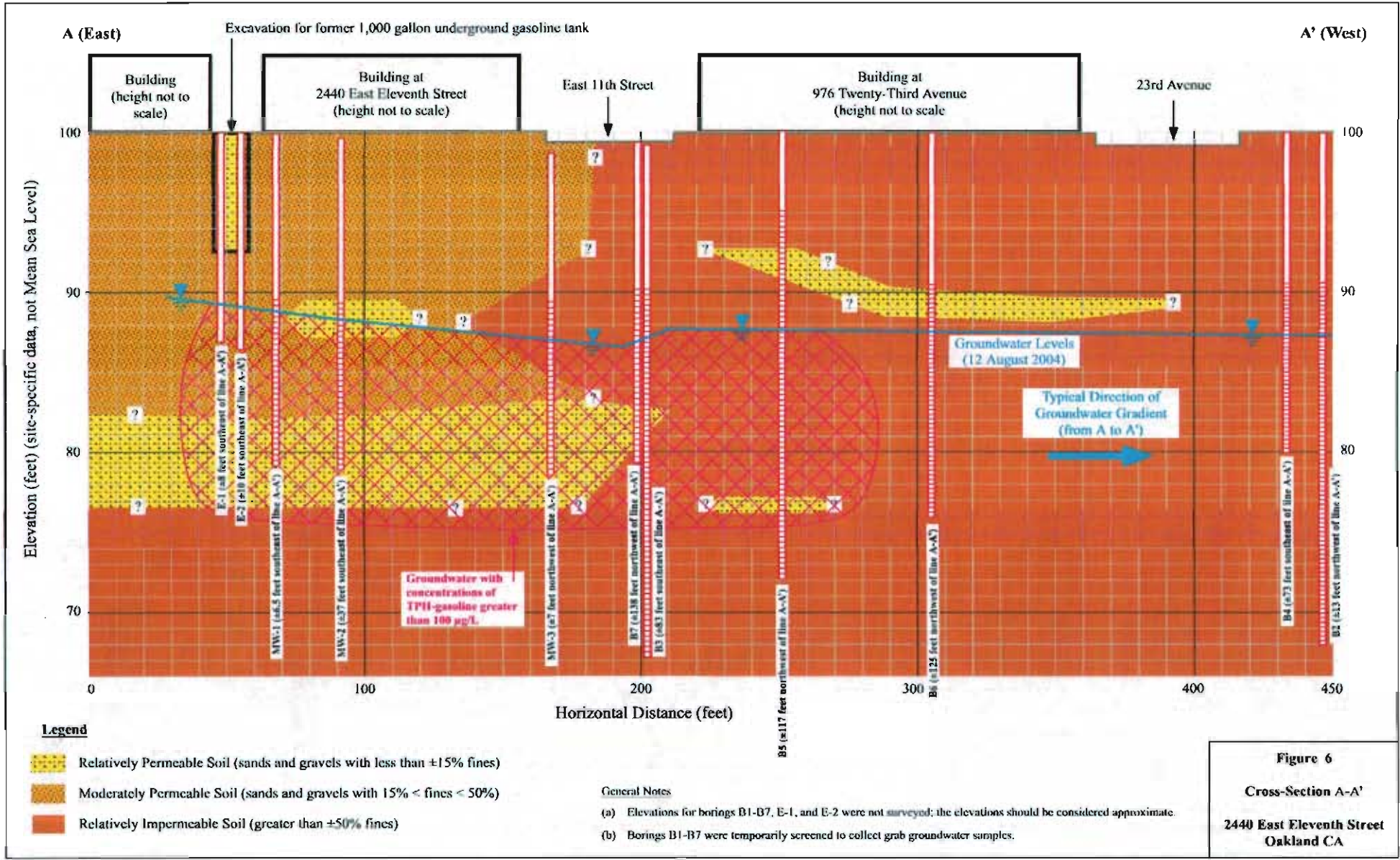




Figure 6
Cross-Section A-A'
2440 East Eleventh Street
Oakland CA

Legend

-  Monitoring well
-  Soilgas sampling location

Location of former 1,000-gallon underground gasoline tank

APN 19-98-5-6
Eandi Metal Works
2440 East Eleventh Street
Oakland CA

Date	TPH-G	Xylenes
Oct 2006	1,500 µg/L	2.5 µg/L
Mar 2007	2,200 µg/L	12 µg/L
Sep 2007	1,000 µg/L	0.82 µg/L
Mar 2008	4,000 µg/L	7.4 µg/L
Sep 2008	1,100 µg/L	5.9 µg/L
Mar 2009	2,100 µg/L	14 µg/L
Sep 2009	1,400 µg/L	1.7 µg/L
Mar 2010	2,500 µg/L	15 µg/L
Sep 2010	640 µg/L	<1 µg/L

Date	TPH-G	Xylenes
Oct 2006	830 µg/L	7.8 µg/L
Mar 2007	470 µg/L	1.8 µg/L
Sep 2007	3,400 µg/L	43 µg/L
Mar 2008	950 µg/L	1.9 µg/L
Sep 2008	3,600 µg/L	19 µg/L
Mar 2009	1,600 µg/L	9.7 µg/L
Sep 2009	1,700 µg/L	4.2 µg/L
Mar 2010	400 µg/L	1.2 µg/L
Sep 2010	350 µg/L	1.0 µg/L

Date	TPH-G	Xylenes	CO ₂	O ₂
Aug 2011	20 ppb v/v	<3.9 µg/m ³	27,000 ppm v/v	170,000 ppm v/v

Date	TPH-G	Xylenes
Oct 2006	3,000 µg/L	130 µg/L
Mar 2007	2,800 µg/L	35 µg/L
Sep 2007	1,900 µg/L	9.2 µg/L
Mar 2008	4,900 µg/L	12 µg/L
Sep 2008	2,300 µg/L	5.9 µg/L
Mar 2009	2,600 µg/L	30 µg/L
Sep 2009	1,800 µg/L	2.5 µg/L
Mar 2010	2,100 µg/L	9.4 µg/L
Sep 2010	1,800 µg/L	2.3 µg/L

Date	TPH-G	Xylenes	CO ₂	O ₂
Aug 2011	47 ppb v/v	5.6 µg/m ³	59,000 ppm v/v	120,000 ppm v/v

Eandi Metal Works
976 23rd Avenue
Oakland CA

Date	TPH-G	Xylenes
Oct 2006	<50 µg/L	<0.5 µg/L
Mar 2007	<50 µg/L	<0.5 µg/L
Sep 2007	<50 µg/L	<0.5 µg/L
Mar 2008	<50 µg/L	<0.5 µg/L
Sep 2008	<50 µg/L	<0.5 µg/L
Mar 2009	<50 µg/L	<0.5 µg/L
Sep 2009	<50 µg/L	<0.5 µg/L
Mar 2010	<50 µg/L	<0.5 µg/L

Date	TPH-G	Xylenes
Oct 2006	7,200 µg/L	30 µg/L
Mar 2007	7,000 µg/L	34 µg/L
Sep 2007	9,300 µg/L	38 µg/L
Mar 2008	6,500 µg/L	13 µg/L
Sep 2008	7,300 µg/L	12 µg/L
Mar 2009	3,700 µg/L	4.7 µg/L
Sep 2009	5,100 µg/L	9.2 µg/L
Mar 2010	2,400 µg/L	7.7 µg/L
Sep 2010	3,000 µg/L	10 µg/L

Date	TPH-G	Xylenes	CO ₂	O ₂
Aug 2011	55 ppb v/v	<4.5 µg/m ³	110,000 ppm v/v	62,000 ppm v/v

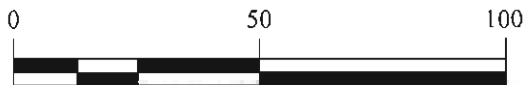
East Eleventh Street

25th Avenue

Figure 7

Detectable Soilgas Results and Companion Groundwater Results

2440 East Eleventh Street
Oakland CA



Approximate Scale in Feet

Basemap: Aerial photograph, flown 24 August 1998, photograph number ALA-AV-6100-11-38, original scale 1:12,000. Pacific Aerial Surveys, Oakland CA



Figure 5
 Estimated Extent of Groundwater Contamination (8 March 2010)
 2440 East Eleventh Street
 Oakland CA

Table 4
Soil Analytical Data
2440 East Eleventh Street
Oakland CA

Location	Sample Date	Sample Type	Sample Depth (feet)	TPH-Diesel (mg/kg)	TPH-Kerosene (mg/kg)	TPH-Stoddard Solvent (mg/kg)	TPH-Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)	Other Fuel Oxygenates (EPA Method 8260) (mg/kg)	Total Lead (mg/kg)
E-1	10 July 1995	Grab (liner)	6	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005 ⁽¹⁾	NM	15.9
		Grab (liner)	12.5	NM	NM	NM	1.4	0.058	0.15	0.059	0.30	0.017 ⁽¹⁾	NM	10.5
E-2	10 July 1995	Grab (liner)	12.5	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005 ⁽¹⁾	NM	12.8
Base	9 June 2004	Grab (liner)	7.5-8	<1	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	43
Sidewall NW	9 June 2004	Grab (liner)	5-5.5	<1	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	5.5
Sidewall NE	9 June 2004	Grab (liner)	5-5.5	<1	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	22
Sidewall SW	9 June 2004	Grab (liner)	5-5.5	<1	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	7.9
Sidewall SE	9 June 2004	Grab (liner)	5-5.5	<1	<1	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	42
MW-1	10 July 1995	Grab (liner)	11	NM	NM	NM	45	<0.05	<0.05	0.33	1.5	<0.05	NM	15.6
		Grab (liner)	16	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	NM	10.8
MW-2	10 July 1995	Grab (liner)	11	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	NM	10.7
		Grab (liner)	16	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	NM	11.2
MW-3	10 July 1995	Grab (liner)	11	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	NM	13.5
		Grab (liner)	16	NM	NM	NM	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	NM	9.1
B1	12 August 2004	Grab (liner)	12-12.5	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	2.0
		Grab (liner)	19.5-20	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	3.8
B2	12 August 2004	Grab (liner)	11.5-12	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	6.0
		Grab (liner)	31.5-32	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	5.3
B3	12 August 2004	Grab (liner)	19.5-20	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	4.7
		Grab (liner)	28.5-29	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	10
B4	12 August 2004	Grab (liner)	16-16.5	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	13
		Grab (liner)	19.5-20	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	6.6
B5	12 August 2004	Grab (liner)	11.5-12	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	5.0
		Grab (liner)	27.5-28	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	5.9
B6	12 August 2004	Grab (liner)	11.5-12	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	8.4
		Grab (liner)	23.5-24	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	61
B7	12 August 2004	Grab (liner)	18-18.5	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	11
		Grab (liner)	19.5-20	NM	NM	NM	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 to <0.01	5.1
Environmental Screening Level - Shallow Soil, Residential Scenario, Groundwater is NOT a Potential Source of Drinking Water				100	100	100	100	0.18	9.3	32	11	2	-	150

General Notes

- (a) TPH = total petroleum hydrocarbons. MtBE = methyl tert-butyl ether.
- (b) 10 July 1995 samples were collected by AGI Technologies (Bellevue WA); 2004 samples were collected by GSI/Inform (Berkeley CA).
- (c) 10 July 1995 samples were analyzed by Anasiris Laboratories (San Jose CA); 2004 samples were analyzed by SFL, San Francisco (Pleasanton CA).
- (d) Depth measured from adjacent ground or pavement surface.
- (e) NM = not measured.
- (f) Environmental Screening Levels from: *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - February 2002)*. Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA, February 2002. www.waterboards.ca.gov/sanfrancisco/bay/soil

Footnote

- (1) For the 10 July 1995 samples, MtBE was analyzed by EPA Method 8020 and other fuel oxygenates were not analyzed for.

Table 6
Soil Analytical Data from Monitoring Wells MW4 and MW5
2440 East Eleventh Street
Oakland CA

Location	Sample Date	Sample Type	Sample Depth (feet)	Total Lead (mg/kg)	TPH-gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2-Dichloroethane (mg/kg)	Ethylene Dibromide (mg/kg)	MtBE (mg/kg)	Other Fuel Oxygenates (mg/kg)
MW4	28 Sep 2006	Grab	10-10.5	<10	<0.200	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010 to <0.200
	28 Sep 2006	Grab	15-15.5	5.7	<0.200	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010 to <0.200
MW5	28 Sep 2006	Grab	10-10.5	7.5	<0.200	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010 to <0.200
	28 Sep 2006	Grab	13.5-14	5.9	26.0 ⁽¹⁾⁽²⁾	<0.010	<0.010	0.160	0.420	<0.010	<0.010	<0.010	<0.010 to <0.200
	28 Sep 2006	Grab	16.5-17	6.5	2.5	<0.010	<0.010	0.018	0.044	<0.010	<0.010	<0.010	<0.010 to <0.200

General Notes

- (a) TPH = total petroleum hydrocarbons. MtBE = methyl tert-butyl ether.
 (b) Depth intervals were measured from the adjacent ground surface.

Footnotes

- (1) This sample was originally analyzed within the recommended hold time. Re-analysis with dilution was performed past the recommended hold time.
 (2) The concentration represents an estimated value - above the calibration range of the laboratory instrument.

ANALYTICAL RESULTS

The following sections give the analytical results for soil samples collected from the tank pit and soil stockpile from each of the removed tanks. The laboratory analytical results are given in table 1 (TPHg & BTEX) and table 2 (TPHd and Lead). The detection limit and analytical method for each analyzed parameter are indicated in the tables. A copy of the laboratory report is included in Appendix C.

Sample Number	TPHg (ppm)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
A-1	620	4400	25000	9300	55000
A-2	1100	11000	64000	19000	110000
A-PL	ND	23	6.0	ND	60
ASP-1,2	108	33	320	51	1400
B-1	ND	ND	ND	ND	14
BSP-1,2	ND	ND	ND	ND	ND
C-1	NA	ND	15	ND	ND
C-2	NA	ND	16	ND	ND
CSP-1,2	NA	ND	ND	ND	ND
DETECTION LIMIT	1.0	5.0	5.0	5.0	5.0
METHOD OF ANALYSIS	5030/ 8015	8020	8020	8020	8020
ppm = parts per million (mg/kg equivalent) ppb = parts per billion (ug/kg equivalent)					

Table 1 Analytical Results (TPHg & BTEX)

Sample Number	TPHd (ppm)	L e a d (ppm)
A-1	NA	4.4
A-2	NA	ND
A-PL	NA	6.0
ASP-1,2	NA	3.9
B-1	NA	4.8
BSP-1,2	NA	14.0
C-1	ND	ND
C-2	ND	ND
CSP-1,2	130	ND
DETECTION LIMIT		
ANALYTICAL METHOD		
ppm = parts per million		
ND = Not Detected		

Table 2 (TPHd & Lead)

1,000-gallon Gasoline Tank

Analytical results of soil samples A-1, A-2, A-PL, and ASP-1,2 are given in table 1 (TPHg and BTEX) and table 2 (Lead). Analytical results indicate that concentrations of TPHg were detected in samples A-1, A-2, and ASP-1,2. BTEX constituents Benzene, Toluene, and Xylenes were detected in each of the samples. Ethylbenzene was detected in samples A-1, A-2, and ASP-1,2. Lead was also detected in samples A-1, A-PL, and ASP-1,2.

Table 9
Analytical Results from Soilgas Sampling
2440 East Eleventh Street
Oakland CA

Location	Sample Date	Sample Interval (feet)	Purge Flowrate (liter/min)	Purge Volume (liter)	Number of Standard Purge Volumes (sandpack volumes)	Sample Flowrate (liter/min)	Sample Volume (liter)	Approximate Depth to Groundwater (feet)	TPH-gasoline (gasoline range organics, C6-C12) (ppb v/v)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethylbenzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ($\mu\text{g}/\text{m}^3$)	Other Volatile Organic Compounds ($\mu\text{g}/\text{m}^3$)	Helium (ppm v/v)	Ratio of Helium in Sample to Helium in Shroud (%)	Carbon Monoxide (ppm v/v)	Carbon Dioxide (ppm v/v)	Oxygen (ppm v/v)	Methane (ppm v/v)	
SG1	8 Aug 2011	5.0-6.5	0.167	.668	1.1	0.167	1.4	11.0	20 ⁽¹⁾	<2.8	<3.4	<3.9	<3.9	Propylene = 2.8 Acetone = 20 2-Butanone = 6.0 Others <1.5 to 9.5	<1,800	<1	<1,800	26,000	170,000	<1,800	
SG2	8 Aug 2011	5.0-6.5	0.167	.668	1.1	0.167	1.4	11.0	47 ⁽¹⁾	<3.3	<3.8	<4.4	5.6	Propylene = 9.9 Acetone = 28 Carbon Disulfide = 15 n-Hexane = 16 2-Butanone = 9 Cyclohexane = 4.6 n-Heptane = 4.5 Tetrachloroethane = 120 Others <1.8 to 11	9,900	4.4	<2,000	59,000	120,000	<2,000	
SG3	8 Aug 2011	5.0-6.5	0.167	.668	1.1	0.167	1.4	11.0	55	<3.3	<3.9	<4.5	<4.5	Freon 12 = 9.3 Trichlorofluoromethane = 61 Acetone = 26 2-Butanone = 7.1 Tetrachloroethane = 60 1,2,4-Trichlorobenzene = 9.9 Benzyl chloride = 6.5 1,2,4-Trichlorobenzene = 38 Hexachlorocyclohexane = 24 Others <1.8 to 11	<2,100	<1	<2,100	110,000	62,000	<2,100	
Environmental Screening Level - Shallow Soilgas (vapor intrusion), Residential Exposure									1,720 ⁽²⁾	84	63,000	980	21,000								
California Human Health Screening Level (CHHSL) - Shallow Soilgas (vapor intrusion), Residential Land Use										36.2	135,000		315,000								

General Notes

- (a) TPH-gasoline was analyzed by Method TO-3. Volatile organic compounds were analyzed by Method TO-15. Fixed gases (helium, carbon monoxide, carbon dioxide, oxygen, methane) were analyzed by ASTM D-1946.
- (b) The ratio of helium in the sample to helium in the shroud assumes the concentration inside the shroud = 22.5% (225,000 ppm v/v). The shroud concentration was maintained between 20% and 25% during purging and sampling.
- (c) California Human Health Screening Levels (CHHSL) from: *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*. Prepared by California Environmental Protection Agency. November 2004, revised January 2005.
- (d) Environmental Screening Levels (ESL) from: *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - November 2007, Revised May 2008)*. Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA. November 2007, revised 27 May 2008. (www.waterboards.ca.gov/sanfranciscobay/esl.shtml)

Footnote:

- (1) The analytical result was below the method-specific reporting limit; accordingly, the analytical result should be considered an estimate.
- (2) The environmental screening level was cited in $\mu\text{g}/\text{m}^3$. This was converted to ppb v/v assuming gasoline could be represented by the compound decane ($\text{C}_{10}\text{H}_{22}$) (molecular weight = 142.29).

Table 5 (Page 1 of 2)
 Groundwater Analytical Data from Monitoring Wells
 2440 East Eleventh Street
 Oakland CA

Location	Sample Date	Sample Type	Total Lead (µg/L)	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-Dichloroethane (µg/L)	Ethylene Dibromide (µg/L)	MtBE (µg/L)	Other Fuel Oxygenates (EPA Method 8260) (µg/L)
MW1	17 Jul 1995	Grab	<40	22,000	390	2,000	800	5,300			<125	
	20 Oct 1995	Grab	<40	14,000	270	540	360	1,800				
	25 Jan 1996	Grab	<40	16,000	740	1,300	490	2,700			<500	
	25 Apr 1996	Grab	<40	4,600	180	450	190	1,000			<250	
	11 Jun 2001	Grab	14	7,100	14	35	240	720				
	5 Feb 2002	Grab	3.7	9,300	6.3	11	230	560			<0.70	
	12 Aug 2004	Grab	<5.0	2,900	9.1	6.0	130	160			0.72	<0.50 to <5.0
	2 Mar 2005	Grab		950	1.9	0.60	19	4.0			0.80	<0.50 to <5.0
	2 Oct 2006	Grab	<100	830	4.1	0.80	44	7.8	<0.50	<0.50	<0.50	<0.50 to <100
	20 Mar 2007	Grab		470	2.1	<0.50	8.5	1.8	<0.50		0.63	<0.50 to <100
	10 Sep 2007	Grab		3,400	18	6.4	170	43	<0.50		1.1	<0.50 to <100
	10 Mar 2008	Grab		950	2.9	0.66	19	1.9	<0.50		0.72	<0.50 to <100
	8 Sep 2008	Grab		3,600	14	6.5	200	19	<0.50		0.62	<0.50 to <100
	3 Mar 2009	Grab		1,600	5.2	2.1	68	9.7			0.56	<0.50 to <5.0
	1 Sep 2009	Grab		1,700	7.0	2.2	64	4.2			<0.50	<0.50 to <5.0
8 Mar 2010	Grab		400	1.0	<0.50	17	1.2			<0.50	<0.50 to <4.0	
10 Sep 2010	Grab		350	4.6	0.76	12	1.0			<0.50	<0.50 to <4.0	
MW2	17 Jul 1995	Grab	56.4	21,000	370	1,700	930	5,100			<125	<0.50 to <5.0
	20 Oct 1995	Grab	<40	730	18	27	26	7.9				
	25 Jan 1996	Grab	<40	14,000	74	660	1,000	2,600			670	
	25 Apr 1996	Grab	<40	13,000	370	440	1,000	2,900			<500	
	12 Jun 2001	Grab	7.7	3,200	11	6.2	170	270				
	5 Feb 2002	Grab	3.5	2,900	7.6	3.8	220	160			<0.70	
	12 Aug 2004	Grab	<5.0	3,100	2.6	1.8	<0.50	13			<0.50	<0.50 to <5.0
	2 Mar 2005	Grab		3,700	<5.0	<2.5	340	22			<2.5	<2.5 to <2.5
	2 Oct 2006	Grab	<100	7,200	<2.5	3.0	380	30	<2.5	<2.5	<2.5	<2.5 to <500
	20 Mar 2007	Grab		7,000	<5.0	<5.0	370	34	<5.0		<5.0	<5.0 to <1,000
	10 Sep 2007	Grab		9,300	<2.5	3.8	530	38	<2.5		<2.5	<2.5 to <500
	10 Mar 2008	Grab		6,500	<2.5	<2.5	200	13	<2.5		<2.5	<2.5 to <500
	8 Sep 2008	Grab		7,300	<2.5	<2.5	290	12	<2.5		<2.5	<2.5 to <500
	3 Mar 2009	Grab		3,700	<0.50	1.1	<0.50	4.7			<0.50	<0.50 to <5.0
	1 Sep 2009	Grab		5,100	1.4	1.8	140	9.2			<1.0	<1.0 to <1.0
8 Mar 2010	Grab		2,400	1.7	2.3	100	7.7			<1.0	<1.0 to <8.0	
10 Sep 2010	Grab		3,000	1.7	2.1	160	10			<1.0	<1.0 to <8.0	
MW3	17 Jul 1995	Grab	153	8,400	1,200	150	1,000	1,700			<125	
	20 Oct 1995	Grab	<40	5,800	600	590	43	340				
	25 Jan 1996	Grab	<40	10,000	1,200	290	870	1,300			<250	
	25 Apr 1996	Grab	<40	8,900	830	140	1,000	1,000			400	
	12 Jun 2001	Grab	7.4	1,800	37	4.5	98	19				
	5 Feb 2002	Grab	4.4	1,100	32	2.1	76	9.5			<0.50	
	12 Aug 2004	Grab	<5.0	1,100	4.5	<0.50	6.0	1.8			1.4	<0.50 to <5.0
	2 Mar 2005	Grab		3,000	27	3.0	76	22			<2.5	<2.5 to <2.5
	2 Oct 2006	Grab	<100	1,500	6.6	<0.50	5.0	2.5	<0.50	<0.50	<0.50	<0.50 to <100
	20 Mar 2007	Grab		2,200	15	1.6	14	12	<0.50		0.52	<0.50 to <100
	10 Sep 2007	Grab		1,000	4.2	<0.50	<0.50	0.82	<0.50		0.53	<0.50 to <100
	10 Mar 2008	Grab		4,000	13	1.1	7.0	7.4	<0.50		<0.50	TAME = 0.53 Others <0.50 to <100
	8 Sep 2008	Grab		1,100	9.7	0.75	7.7	5.9	<0.50		0.59	<0.50 to <100
	3 Mar 2009	Grab		2,100	14	1.6	16	14			<0.50	<0.50 to <5.0
	1 Sep 2009	Grab		1,400	4.7	<0.50	0.52	1.7			<0.50	<0.50 to <5.0
8 Mar 2010	Grab		2,500	13	1.1	6.8	15			<0.50	<0.50 to <4.0	
10 Sep 2010	Grab		640	1.9	<0.50	<0.50	<1.0			<0.50	<0.50 to <4.0	
MW4	2 Oct 2006	Grab	<100	<50	<0.50	<0.50	0.96	<0.50	<0.50	<0.5	<0.5	<0.50 to <100
	20 Mar 2007	Grab		<50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.5	<0.50 to <100
	10 Sep 2007	Grab		<50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.5	<0.50 to <100
	10 Mar 2008	Grab		<50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.5	<0.50 to <100
	8 Sep 2008	Grab		<50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.5	<0.50 to <100
	3 Mar 2009	Grab		<50	<0.50	<0.50	<0.50	<1.0			<0.5	<0.50 to <5.0
	1 Sep 2009	Grab		<50	<0.50	<0.50	<0.50	<1.0			<0.5	<0.50 to <5.0
	8 Mar 2010	Grab		<50	<0.50	<0.50	<0.50	<1.0			<0.50	<0.50 to <4.0

Table 5 (Page 2 of 2)
Groundwater Analytical Data from Monitoring Wells
2440 East Eleventh Street
Oakland CA

Location	Sample Date	Sample Type	Total Lead (µg/L)	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	1,2-Dichloroethane (µg/L)	Ethylene Dibromide (µg/L)	MtBE (µg/L)	Other Fuel Oxygenates (EPA Method 8260) (µg/L)
MW5	2 Oct 2006	Grab	<100	3,000	20	0.97	69	130	<0.50	<0.50	2.6	<0.50 to <100
	20 Mar 2007	Grab		2,800	13	1.5	27	35	<0.50		1.6	<0.50 to <100
	10 Sep 2007	Grab		1,900	11	0.78	10	9.2	<0.50		2.5	<0.50 to <100
	10 Mar 2008	Grab		4,900	7.8	1.4	13	12	<0.50		1.2	<0.50 to <100
	8 Sep 2008	Grab		2,300	9.7	0.75	7.7	5.9	<0.50		2.3	<0.50 to <100
	3 Mar 2009	Grab		2,600	11	4	60	30			<2.5	<2.5 to <25
	1 Sep 2009	Grab		1,800	5.5	0.68	5.5	2.5			0.98	<0.50 to <5.0
	8 Mar 2010	Grab		2,100	6.0	1.8	14	9.4			<0.50	<0.50 to <4.0
	10 Sep 2010	Grab		1,800	5.7	0.65	3.6	2.3			<0.50	<0.50 to <4.0

Environmental Screening Level - California Maximum Contaminant Levels (drinking water criteria)	15			1.0	150	300	1,750	0.5	0.050			
Environmental Screening Level - Risk-Based Drinking Water Equivalent for Carcinogens, 10-6 Excess Cancer Risk (drinking water criteria)				0.35		3.2		0.38	0.0097			
Environmental Screening Level - California Office of Environmental Health Hazard Assessment (OEHHA), Public Health Goal (PHG) (drinking water criteria)	2.0			0.15	150	300	1,800	0.4				
Environmental Screening Level - Taste and Odor Threshold (drinking water criteria)	50,000	100	170	40	30	20	700	50,000				
Environmental Screening Level - Volatilization from Groundwater and Subsequent Vapor Intrusion, Residential Use		Measure Soilgas	540	380,000	170,000	160,000	200	150				
Environmental Screening Level - Volatilization from Groundwater and Subsequent Vapor Intrusion, Commercial Use		Measure Soilgas	1,800	530,000	170,000	160,000	690	510				
Environmental Screening Level - Gross Contamination Ceiling Value for Groundwater (nuisance odors, etc.)	50,000	5,000	20,000	400	300	5,300	50,000	50,000				
Environmental Screening Level - Estuarine Surface Water - Chronic Habitat Aquatic Toxicity	2.5	210	46	130	43	100	2,000	1,400				
Environmental Screening Level - Estuarine Surface Water - Bioaccumulation/Human Consumption			71	200,000	29,000		99					

General Notes

- (a) TPH = total petroleum hydrocarbons. MtBE = methyl tert-butyl ether. TAME = tert-amyl methyl ether.
- (b) Samples were collected using a Teflon bailer fitted with a bonum-emptying device.
- (c) Environmental Screening Levels from: *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (Interim Final - November 2007, Revised May 2008)*. Prepared by San Francisco Bay Regional Water Quality Control Board, Oakland CA. 27 May 2008. www.waterboards.ca.gov/sanfrancisco/haj/csl.html

Table 8
Groundwater Analytical Data from Borings
2440 East Eleventh Street
Oakland CA

Location	Sample Date	Depth to Water (feet)	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)	Other Fuel Oxygenates (EPA Method 8260b) (µg/L)	Total Lead (µg/L)
B1	12 August 2004	10.7	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	26
B2	12 August 2004	13.0	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	71
B3	12 August 2004	11.2	58 ⁽¹⁾	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	12
B4	12 August 2004	12.5	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	<5
B5	12 August 2004	12.3	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	180
B6	12 August 2004	12.6	<50	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	83
B7	12 August 2004	12.9	81 ⁽¹⁾	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5 to <5	83

General Notes

- (a) TPH = total petroleum hydrocarbons.
- (b) MtBE = methyl tert-butyl ether.
- (c) Samples were collected by Streamborn (Berkeley CA).
- (d) Samples were analyzed by STL San Francisco (Pleasanton CA).
- (e) Samples consisted of grab samples, collected from temporary casings using a teflon hailer. Low-flow purge techniques were employed.
- (f) The depth to water was measured relative to the adjacent ground surface after placing the temporary casing in the boring and waiting at least one hour.

Footnote

- (1) The laboratory reported that the sample result did not match the standard.

Boring No. B1 (Page 1 of 2)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS N 37° 46.785' Coordinates W 122° 14.137'</p> <p>Location Boring on north side of 11th Street, approximately 125 feet south of 25th Avenue intersection.</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Matthew B. Hall STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 8:00 am, 12 August 2004 Finish 9:00 am, 12 August 2004</p> <p>Driller Precision Sampling(Ernesto)</p> <p>Drilled Depth ± 20 feet</p> <p>Groundwater ± 12 feet (during drilling)</p> <p>Groundwater ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)
0.0						Asphalt.	
1.0						Fill. No staining, no odor. Drilled using hand auger.	♁
2.0						Lean Clay (CL). Dry, gray. Moderate plasticity, moderate dilatancy. <10% fine grained sand. No staining, no odor. Drilled using hand auger.	♁
3.0							
4.0		CL				Same as above except color change to brown. No staining, no odor.	♁
5.0							
6.0				NA	48		
7.0						Poorly-Graded Sand with Clay and Gravel (SP-SC). Dry, brown. Fine to medium-grained sand. <20% subangular gravel up to 0.25-inch. <10% fines. No staining, no odor.	♁
8.0		SP-SC				Same as above except gravel increases to <30%. No staining, no odor.	♁
9.0							
10.0				NA	48		

Boring No. B1 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)	
10.0	Graphic Log					Same as previous page. No staining, no odor.	5	
11.0		SP-SC						
12.0						Clayey Sand with Gravel (SC). Wet, brown. Fine to medium-grained sand. <20% subangular gravel up to 0.25-inch. ±20% fines. No staining, no odor.	5	
13.0								
14.0		SC			NA	36		
15.0								
16.0							Clayey Gravel with Sand (GP-GC). Wet, brown. Subangular gravel up to 0.25-inch. <20% medium to coarse-grained sand. ±15% fines. No staining, no odor.	5
17.0		GP-GC					Poorly-Graded Sand with Clay and Gravel (SP-SC). Wet, brown. Fine to medium grained sand. ±15% small subangular gravel. ±10% fines. No staining, no odor.	5
18.0					NA	48		
19.0		SP-SC						
20.0							Total drilled depth = 20 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
21.0								
22.0								
23.0								
24.0								
25.0								

Boring No. B2 (Page 1 of 3)


<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS Coordinates N 37° 46.779' W 122° 14.219'</p> <p>Location ±100 feet south of southwest corner of intersection of 23rd Avenue and 11th Street (in the median)</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Matthew B. Hall STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 10:40 am, 12 August 2004 Finish 12:30 am, 12 August 2004</p> <p>Driller Precision Sampling (Ernesto)</p> <p>Drilled Depth ± 32 feet</p> <p>Groundwater (during drilling) ± 23 feet</p> <p>Groundwater (stabilized) ± 13.02 feet</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)	
0.0						Lean Clay with Gravel (CL). Dry, grey. Low plasticity, low dilatancy. <20% poorly-graded gravel up to 1-inch. No staining, no odor.	<5	
1.0		CL						
2.0					NA	48	Lean Clay (CL). Dry, gray. Low plasticity, low dilatancy. <10% fine-grained sand. No staining, no odor.	<5
3.0								
4.0							Lean Clay (CL). Dry, brown. Low to moderate plasticity, low dilatancy. <10% fine grained-sand. <10% well sorted medium gravels. No staining, no odor.	<5
5.0								
6.0		CL			NA	48		
7.0								
8.0							Same as above except gravel increases to <30%. No staining, no odor.	<5
9.0								
10.0				NA	48			

Boring No. B2 (Page 2 of 3)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)		
10.0	[Hatched Pattern]		[Diamond Pattern]			Fat Clay with Sand (CH). Dry, brown. Moderate plasticity, moderate dilatency. <20% fine-grained sand. <5% well sorted medium gravels. No staining, no odor.	<5		
11.0									
12.0							Same as above. No staining, no odor.	<5	
13.0									
14.0						NA	36		
15.0									
16.0				CH				Same as above. No staining, no odor.	<5
17.0									
18.0						NA	48		
19.0									
20.0								Same as above. No staining, no odor.	<5
21.0									
22.0						NA	48		
23.0								Sandy Fat Clay (CH). Wet, brown. Low plasticity, low dilatency. <30% fine to medium-grained sand. <10% medium gravels. No staining, no odor.	<5
24.0				CH					
25.0									

Boring No. B2 (Page 3 of 3)


Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)	
25.0						Fat Clay with Sand (CH). Wet, brown. Moderate plasticity, moderate dilatancy. <20% fine-grained sand. <5% well sorted medium gravels. No staining, no odor.	<5	
26.0		CH						
27.0		CH				Fat Clay (CH). Wet, light brown. High plasticity, high dilatancy. <5% fine-grained sand. No staining, no odor.	<5	
28.0		CH			NA	48	Fat Clay with Sand (CH). Wet, brown. Moderate plasticity, moderate dilatancy. <20% fine to medium-grained sand. <5% gravels. No staining, no odor.	<5
29.0		CH					Fat Clay (CH). Wet, light brown. High plasticity, high dilatancy. <5% fine-grained sand. No staining, no odor.	<5
30.0		CH					Sandy Fat Clay (CH). Wet, light brown. Moderate plasticity, moderate dilatancy. <30% fine to medium-grained sand. <5% gravels. No staining, no odor.	<5
31.0		CH			NA	24	Fat Clay (CH). Wet, light brown. High plasticity, high dilatancy. <5% fine-grained sand. No staining, no odor.	<5
32.0							Total drilled depth = 32-feet. A 0.75-inch diameter slotted PVC temporary casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
33.0								
34.0								
35.0								
36.0								
37.0								
38.0								
39.0								
40.0								

Boring No. B3 (Page 1 of 3)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS Coordinates N 37° 46.790' W 122° 14.168'</p> <p>Location Boring on the north side of 25th Avenue, approximately 20 feet southwest of the 11th Street intersection.</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Michael D. Chendorain STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 9:00 am, 12 August 2004 Finish 10:20 pm, 12 August 2004</p> <p>Driller Precision Sampling (Ernesto)</p> <p>Drilled Depth ± 32 feet</p> <p>Groundwater <input type="checkbox"/> None (during drilling)</p> <p>Groundwater <input type="checkbox"/> ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM <input type="checkbox"/> (ppm v/v)
0.0						Fill. No staining, no odor. Drilled using hand auger.	△
1.0						Sandy Lean Clay (CL). Dry, gray. Low plasticity, low dilatancy. <5% fine to medium-grained sand. No staining, no odor.	
2.0				NA	48		
3.0							
4.0						Same as above. No staining, no odor.	△
5.0		CL					
6.0				NA	48		
7.0						Lean Clay with Sand (CL). Dry, brown. Moderate plasticity, low dilatancy. <10% fine-grained sand. <5% angular gravel. No staining, no odor.	△
8.0						Same as above. No staining, no odor.	△
9.0							
10.0				NA	48		

Boring No. B3 (Page 2 of 3)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	QVMD (ppm v/v)	
10.0						Fat Clay with Sand (CH). Moist, brown. High plasticity, moderate dilatancy. <15% fine-grained sand. <5% fine gravels. No staining, no odor.	△	
11.0								
12.0						Same as above. No staining, no odor.	△	
13.0		CH						
14.0					NA	48		
15.0								
16.0							Fat Clay (CH). Moist, brown. High plasticity, moderate dilatancy. <10% fine-grained sand. Trace gravel. No staining, no odor.	△
17.0		CH						
18.0					NA	48		
19.0								
20.0						Fat Clay with Sand (CH). Moist, brown. Moderate plasticity, moderate dilatancy. <15% fine to coarse-grained sand. <10% fine-grained, round gravel. No staining, no odor.	△	
21.0								
22.0	CH			NA	48			
23.0								
24.0						Fat Clay (CH). Moist, brown. High plasticity, moderate dilatancy. <5% fine-grained sand. <5% fine grained gravel. No staining, no odor.	△	
25.0		CH						

Boring No. B3 (Page 3 of 3)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)
25.0	[Hatched Pattern]	CH	X	NA	48	Same as previous page. No staining, no odor.	6
26.0							
27.0							
28.0	[Hatched Pattern]	CH	X	NA	48	Fat Clay with Sand (CH). Moist, brown. High plasticity, moderate dilatancy. <10% fine-grained sand. <5% fine-grained gravel. No staining, no odor.	6
29.0							
30.0							
31.0							
32.0						Total drilled depth = 32 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
33.0							
34.0							
35.0							
36.0							
37.0							
38.0							
39.0							
40.0							

Boring No. B4 (Page 1 of 2)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS Coordinates N 37° 46.800' W 122° 14.225'</p> <p>Location Boring in the median, west of 23rd Avenue, approximately 25 feet south of the 11th Street intersection.</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Michael D. Chendorain STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 12:45 am, 12 August 2004 Finish 2:00 pm, 12 August 2004</p> <p>Driller Precision Sampling (Ernesto)</p> <p>Drilled Depth ± 20 feet</p> <p>Groundwater ± 16 feet (during drilling)</p> <p>Groundwater ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)	
0.0						Sandy Lean Clay (CL). Dry, dark grey. Moderate plasticity, moderate dilatancy. <30% fine to coarse-grained sand. <5% round gravel up to 1 inch. No staining, no odor.	△	
1.0								
2.0					NA	48	Sandy Lean Clay (CL). Dry, dark brown. Moderate plasticity, moderate dilatancy. <30% fine to medium-grained sand. No staining, no odor.	△
3.0								
4.0							Same as above. No staining, no odor.	△
5.0		CL						
6.0					NA	48		
7.0								
8.0							Same as above. No staining, no odor.	△
9.0								
10.0				NA	48			

Boring No. B4 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)	
10.0		CL				Same as previous page. No staining, no odor.	△	
11.0								
12.0							Sandy Fat Clay (CH). Moist, brown. Moderate plasticity, moderate dilatancy. <30% fine to coarse-grained sand. <10% fine-grained, round gravel. No staining, no odor.	△
13.0								
14.0					NA	48		
15.0								
16.0		CH					Sandy Fat Clay (CH). Wet, brown. Moderate plasticity, moderate dilatancy. <30% fine to coarse-grained sand. <15% fine to coarse-grained, round gravel. No staining, no odor.	△
17.0								
18.0					NA	48	Same as above except soil moisture change to moist. No staining, no odor.	△
19.0								
20.0							Total drilled depth = 20 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
21.0								
22.0								
23.0								
24.0								
25.0								

Boring No. B-5 (page 1 of 3)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS N 37° 46.817' Coordinates W 122° 14.194'</p> <p>Location Boring on the west side of Calcot Avenue, approximately 50 feet north of the 23rd Avenue intersection.</p> <p>Elevation Not measured</p> <p>Drill Method Direct Push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Michael D. Chendorain STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 3:04 pm, 12 August 2004 Finish 3:50 pm, 12 August 2004</p> <p>Driller Ernesto (Precision Sampling)</p> <p>Drilled Depth ± 28 feet</p> <p>Groundwater ± 24 feet (during drilling)</p> <p>Groundwater ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)
0.0	[Diagonal Hatching]					Lean Clay with Sand (CL). Dry, dark brown. Low plasticity, low dilatancy. <10 % fine grained sand. <5% coarse grained gravel up to 1 inch. No staining, no odor.	5
1.0							
2.0				NA	42		
3.0							
4.0		CL				Lean Clay (CL). Dry, dark brown. Moderate plasticity, moderate dilatancy. <10% fine grained sand. No staining, no odor.	5
5.0							
6.0				NA	48		
7.0							
8.0	[Cross-hatching]	SW-SC				Well-Graded Sand with Clay and Gravel (SW-SC). Dry, brown. <20% fine grained gravel. <10% fines. No staining, no odor.	5
9.0		CL				Fat Clay (CH). Dry, brown. High plasticity, moderate dilatancy. <10% fine grained sand. No staining, no odor.	6
10.0				NA	48		

Boring No. B5 (Page 2 of 3)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)	
10.0		CH				Same as previous page. No staining, no odor.	<5	
11.0		CH				Sandy Fat Clay (CH). Dry, brown. High plasticity, moderate dilatancy. <15% fine to coarse-grained sand. <15% coarse-grained, round gravel. No staining, no odor.	<5	
12.0						Fat Clay (CH). Dry, light grey. Moderate plasticity, moderate dilatancy. <10% fine-grained sand. No staining, no odor.	<5	
13.0								
14.0					NA	48		
15.0		CH						
16.0							Same as above. No staining, no odor.	<5
17.0							Fat Clay (CH). Dry, light grey. Moderate plasticity, moderate dilatancy. <10% coarse-grained, round gravel. No staining, no odor.	<5
18.0					NA	48	Fat Clay with Sand (CH). Moist, brown. Moderate plasticity, moderate dilatancy. <15% fine-grained sand. No staining no odor.	<5
19.0								
20.0		CH					Fat Clay with Sand (CH). Moist, light brown. Moderate plasticity, moderate dilatancy. <15% fine-grained sand. No staining no odor.	<5
21.0								
22.0					NA	48	Fat Clay with Sand (CH). Moist, brown. Moderate plasticity, moderate dilatancy. <15% fine-grained sand. No staining no odor.	<5
23.0			SC				Clayey Sand with Gravel (SC). Wet, brown. <20% fine to coarse-grained, round gravel. <15% fines. No staining no odor.	<5
24.0			CH				Sandy Fat Clay (CH). Wet, light brown. Moderate plasticity, moderate dilatancy. <25% fine-grained sand. <10% fine-grained, subangular gravel. No staining, no odor.	<5
25.0					NA	48		

Boring No. B5 (Page 3 of 3)















Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)
25.0		CH				Same as previous page. No staining, no odor.	△
26.0				NA	48	Fat Clay with Sand (CH). Wet, brown. Moderate plasticity, moderate dilatancy. <10% fine-grained sand. <10% fine to coarse-grained, round gravel. No staining, no odor.	△
27.0							
28.0						Total drilled depth = 28 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
29.0							
30.0							
31.0							
32.0							
33.0							
34.0							
35.0							
36.0							
37.0							
38.0							
39.0							
40.0							

Boring No. B6 (Page 1 of 2)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS N 37° 46.814' Coordinates W 122° 14.204'</p> <p>Location Boring is north of 11th Street, approximately 25 feet east of 23rd Avenue intersection.</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Michael D. Chendorain STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 2:12 pm, 12 August 2004 Finish 2:55 pm, 12 August 2004</p> <p>Driller Precision Sampling (Ernesto)</p> <p>Drilled Depth ± 24 feet</p> <p>Groundwater ± 20 feet (during drilling)</p> <p>Groundwater ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)
0.0		ML	X			Sandy Silt (ML). Dry, dark gray. Low plasticity, low dilatancy. <30% fine-grained sand. <10% fine to coarse-grained, subangular gravel. No staining, no odor.	5
1.0							
2.0		ML	X	NA	42	Silt (ML). Dry, dark gray. Low plasticity, low dilatancy. <5% fine-grained sand. No staining, no odor.	5
3.0							
4.0	/ / / / /	CH	X			Fat clay (CH). Dry, dark brown. Moderate plasticity, moderate dilatancy. <5% fine-grained sand. No staining, no odor.	5
5.0							
6.0						NA	48
7.0							
8.0	/ / / / /	CH	X			Same as above. No staining, no odor.	5
9.0							
10.0						NA	48

Boring No. B6 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)
10.0		CH				Same as previous page. No staining, no odor.	△
11.0		GW-GC				Well-Graded Gravel with Clay and Sand (GW-GC). Dry, brown. <25% fine to coarse-grained sand. <10% fines. No staining, no odor.	△
12.0		CH				Sandy Fat Clay with Gravel (CH). Moist, brown. Moderate plasticity, moderate dilatancy. <30% fine to coarse-grained sand. <15% coarse-grained gravel. No staining, no odor.	△
13.0		CH					
14.0				NA	48	Fat Clay (CH). Moist, light brown. Moderate plasticity, moderate dilatancy. <30% fine-grained sand. No staining, no odor.	△
15.0							
16.0		CH				Same as above. No staining, no odor.	△
17.0							
18.0				NA	48	Same as above except soil moisture change to moist. No staining, no odor.	△
19.0		CH				Fat Clay with Gravel (CH). Wet, brown. Moderate plasticity, moderate dilatancy. <15% fine to coarse-grained sand. <20% fine to coarse-grained gravel. No staining, no odor.	△
20.0		CH				Fat Clay (CH). Wet, grey. High plasticity, moderate dilatancy. <5% fine-grained sand. No staining, no odor.	△
21.0							
22.0				NA	48	Sandy Fat Clay with Gravel (CH). Wet, brown. High plasticity, moderate dilatancy. <25% fine to medium-grained sand. <15% coarse-grained, round gravel. No staining, no odor.	△
23.0		CH					
24.0						Total drilled depth = 24 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.	
25.0							

Boring No. B7 (Page 1 of 2)

<p>Project Soil and Groundwater Investigation 2440 East Eleventh Street</p> <p>GPS N 37° 46.827' Coordinates W 122° 14.190'</p> <p>Location Boring in the asphalt north east of Calcot Avenue approximately 10 feet from the southern end of the sidewalk.</p> <p>Elevation Not measured</p> <p>Drill Method Direct-push (Geoprobe)</p> <p>Drill Rig 6610 DT Portable</p> <p>Completion Backfilled with grout</p> <p>Sampling 1.5-inch diameter by 4-foot long acetylene liners placed inside a push tube.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Michael D. Chendorain STREAMBORN (Berkeley CA)</p> <p>Project No. P279 GW</p> <p>Start 4:10 pm, 12 August 2004 Finish 4:35 pm, 12 August 2004</p> <p>Driller Precision Sampling (Ernesto)</p> <p>Drilled Depth ± 20 feet</p> <p>Groundwater ± 18 feet (during drilling)</p> <p>Groundwater ± 10.7 feet (stabilized)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM (ppm v/v)
0.0						Asphalt.	
1.0						Silt with Sand (ML). Dry, dark gray. Moderate plasticity, moderate dilatancy. <15% fine-grained sand. No staining, no odor.	5
2.0				NA	48		
3.0							
4.0						Same as above except color change to dark brown. No staining, no odor.	5
5.0		ML					
6.0				NA	48		
7.0							
8.0						Lean Clay with Sand (CL). Dry, gray with brown mottles. High plasticity, moderate dilatancy. <15% fine-grained sand. No staining, no odor.	5
9.0							
10.0				NA	48		

Boring No. B7 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	Soil Description, Observations, Comments	OVM □ (ppm v/v)		
10.0			X			Same as previous page. No staining, no odor.	5		
11.0									
12.0								Same as above. No staining, no odor.	5
13.0				CL					
14.0					NA	42			
15.0									
16.0			X			Silty Sand with Gravel (SM). Moist, brown. Moderate plasticity, moderate dilatancy. <15% fine-grained gravel. <15% fines. No staining, no odor.	5		
17.0				SM					
18.0					NA	42		Well-Graded Sand with Silt and Gravel (SW-SM). Wet, brown. Moderate plasticity, moderate dilatancy. <15% fine-grained gravel. <10% fines. No staining, no odor.	5
19.0		SW-SM							
20.0						Total drilled depth = 20 feet. A 0.75-inch diameter slotted PVC temporary well casing was placed in the borehole and allowed to sit for at least 1 hour. Water levels were measured and groundwater samples were collected. The well casing was then withdrawn and the borehole was backfilled with grout.			
21.0									
22.0									
23.0									
24.0									
25.0									

Equipment CME 75 Logged by K.Scheller

Land Surface _____ Date 10 Jul 95
 Elevation _____

Well Construction Summary

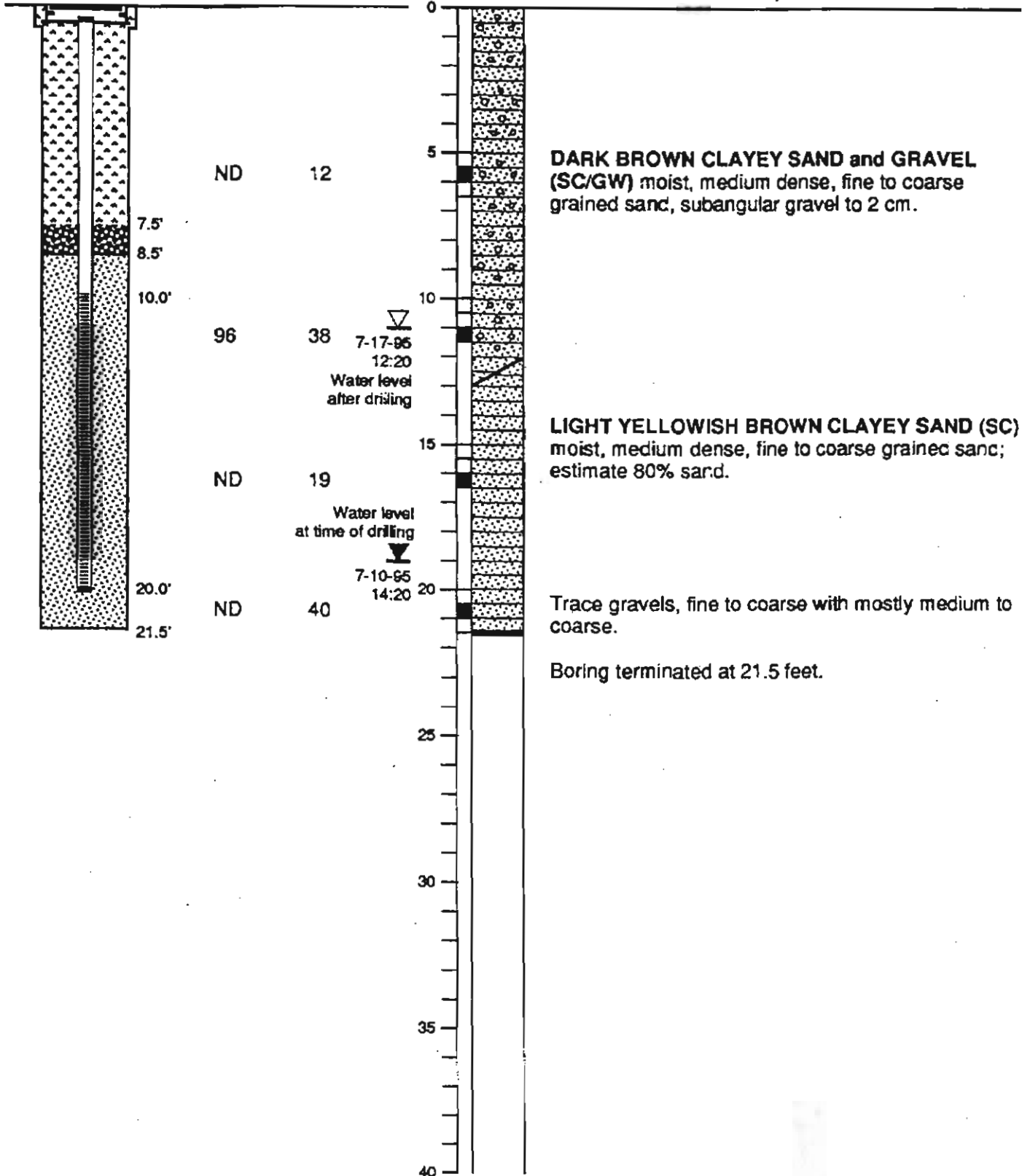
PID (ppm)

Blows per foot

Depth (feet)

Sample Lithology

Description



Log of Monitoring Well MW-1

EANDI Metal Works / Phase II
 Oakland, California

PLATE

3

PROJECT NO.
15,876.001

DRAWN
Bayani

DATE
Aug 95

APPROVED _____

REVISED _____

DATE _____

Equipment CME 75 Logged by K.Scheller

Land Surface _____ Date 10 Jul 95

Elevation _____

Well Construction Summary

PID (ppm)

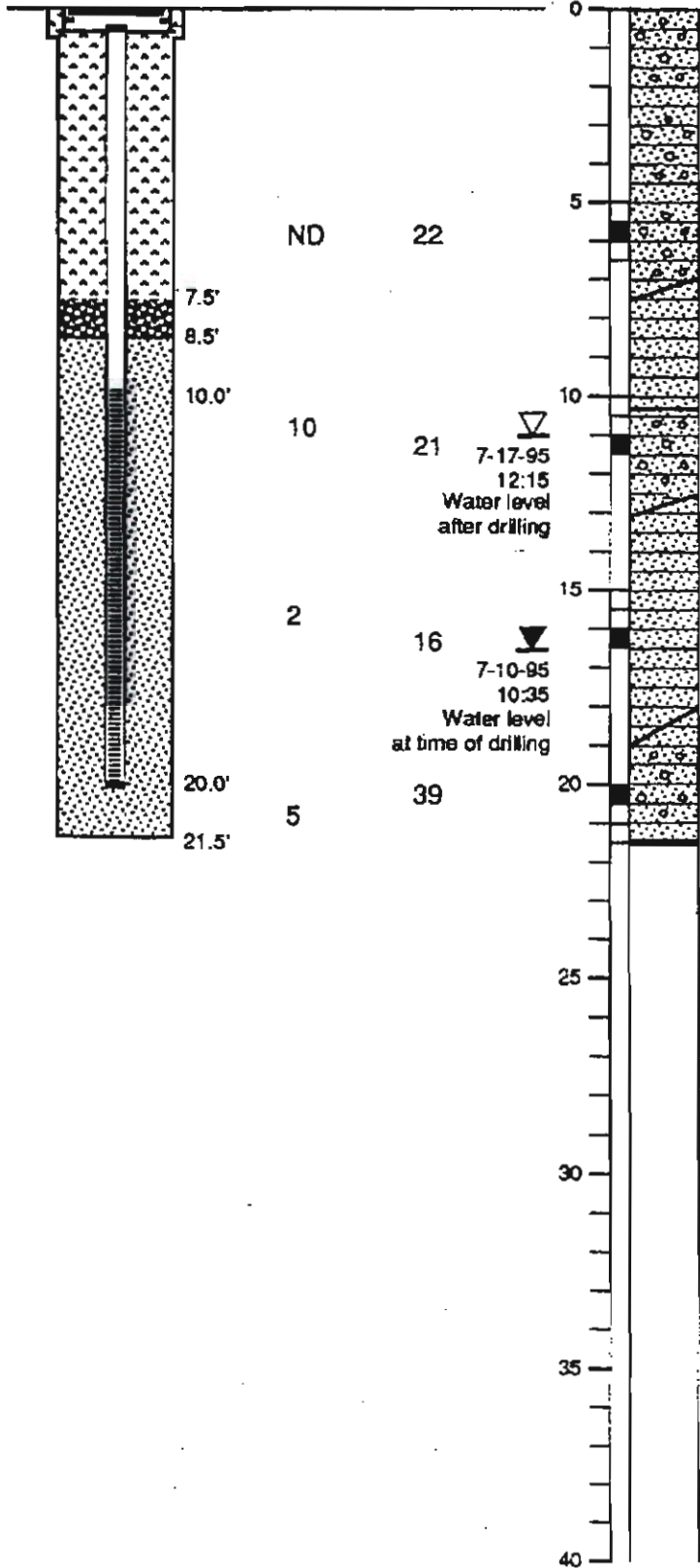
Blows per foot

Depth (feet)

Sample

Lithology

Description



DARK BROWN CLAYEY SAND and GRAVEL (SC) damp, medium dense, fine to coarse grained sand; estimate 30 to 50% subangular to subrounded gravel to 3 cm diameter.

BROWN SANDY CLAY (SC) with bluish gray mottling, moist, stiff, very fine to medium grained sand, medium high plasticity.

BROWN GRAVELLY SAND (SW) moist, medium dense, very fine to medium grained sand, subrounded gravel to 2 cm diameter.

LIGHT BROWN CLAYEY SAND (SC) damp to moist, medium dense, fine to coarse grained, subangular to subrounded gravel.

LIGHT BROWN CLAYEY GRAVELLY SAND (SW) damp to moist, dense; estimate 20 to 30% subangular to subrounded gravel to 2 cm, fine to coarse sand, some wet pockets; estimate 10 to 20% clay.

Boring terminated at 21.5 feet.

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Log of Monitoring Well MW-2

EANDI Metal Works / Phase II
Oakland, California

PLATE

4

PROJECT NO.
15,876.001

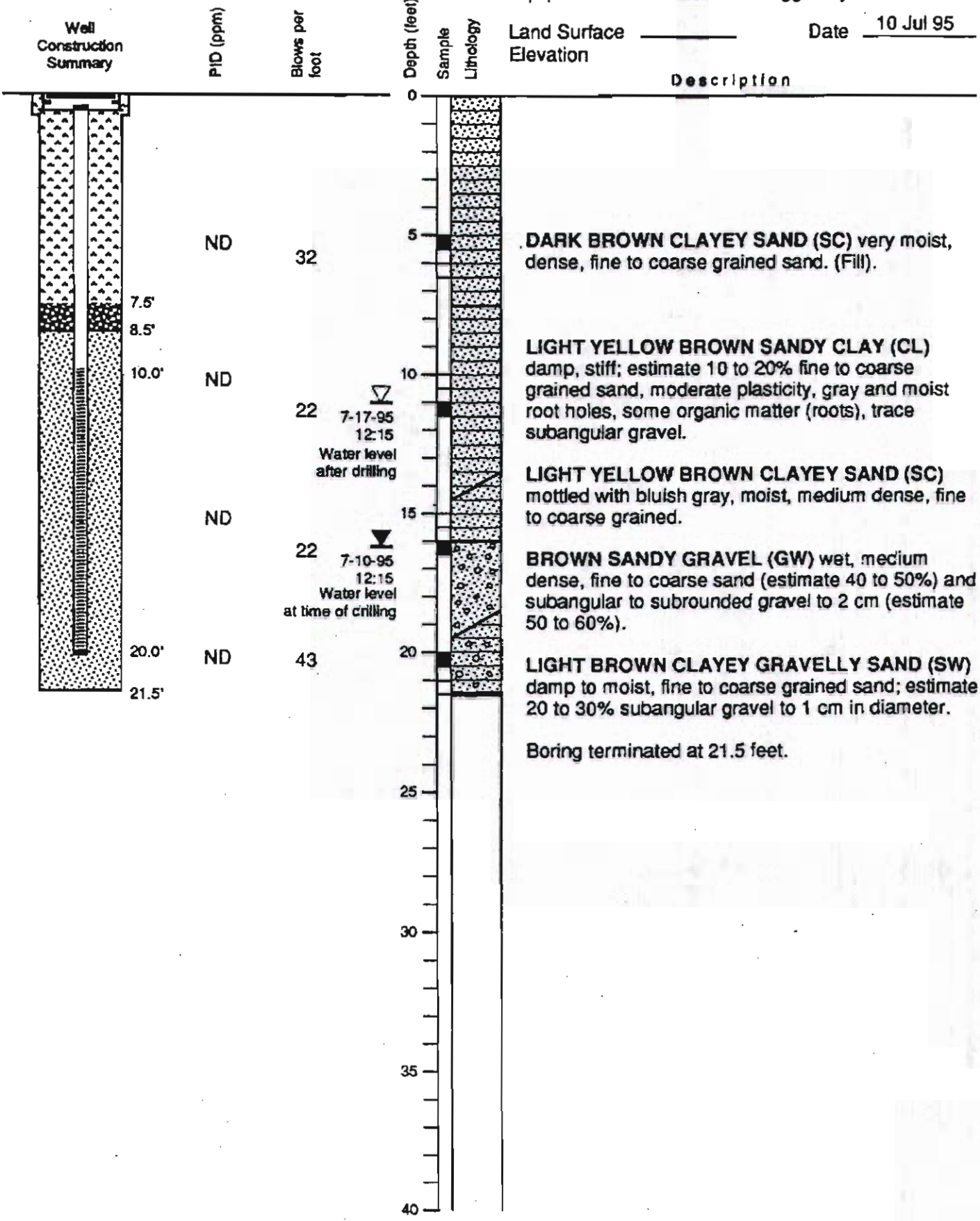
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Bayani

DATE
Aug 95

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REVISED _____

DATE _____


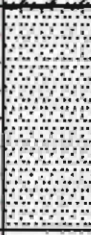


Boring MW4 (Page 1 of 2)

<p>Project 2440 East Eleventh Street Oakland CA</p> <p>GPS Coordinates N 37° 46.799' W 122° 14.170'</p> <p>Location In parking lane, near northeast corner of 976 23rd Avenue</p> <p>Elevation Top of casing, north side = 19.58 (MSL datum). Ground surface = 20.27 (MSL datum).</p> <p>Drill Method and Rig Direct push for soil sampling, then overdrilled using 4.25-inch ID by 8.25-inch OD hollow-stem auger. Geoprobe 6610 rig.</p> <p>Sampling 60" long by ±1.5" ID, direct push macro-core liners. Samples collected continuously.</p> <p>Completion 2-inch diameter SCH 40 PVC well with traffic-rated utility box.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Jeremy C. Gekov STREAMBORN (Berkeley CA)</p> <p>Project No. P279</p> <p>Start 10:00 am, 28 Sep 2006</p> <p>Finish 1:00 pm, 28 Sep 2006</p> <p>Driller Ernesto (driller). Precision Sampling (Richmond CA)</p> <p>Drilled Depth 17.0 feet</p> <p>Groundwater 11.48 feet (stabilized) 15 feet (during drilling)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	OVM (ppm v/v)	Soil Description, Observations, Comments
0.0			X				Hand auger drilling to 5 feet. Asphalt with underlying aggregate base.
1.0			X			<5	Lean clay (CL). Moist, dark brown. Low plasticity. <10% fine-grained sand. <5% gravels up to 0.125-inch. No staining, no odor.
2.0			X				
3.0		CL	X		60		
4.0			X				
5.0			X				
6.0		CL	X			<5	Gravelly lean clay with sand (CL). Moist, brown. Low plasticity. <30% gravels up to 0.25-inch. <20% medium- to coarse-grained sand. No staining, no odor.
7.0			X				
8.0			X		60	<5	Lean clay (CL). Moist, brown. Low plasticity. <5% gravels up to 0.125-inch. <10% fine-grained sand. No staining, no odor.
9.0		CL	X				
10.0			X				

Boring MW4 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	OVM (ppm v/v)	Soil Description, Observations, Comments
10.0		CL	X			<5	Lean clay with sand (CL). Moist, brown. Low plasticity. <10% gravels up to 0.5-inch. <20% fine-grained sand. No staining, no odor.
11.0							
12.0							
13.0					60		
14.0							
15.0		SP-SC	X			<5	Poorly-graded sand with clay (SP-SC). Wet, brown. Medium- to coarse-grained sand. <10% gravels up to 0.125-inch. <10% fines. No staining, no odor.
16.0						24	
17.0							Final drilled depth = 17 feet. The boring was completed as a 2-inch diameter monitoring well installed to 17 feet. Refer to the monitoring well completion schematic.
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							

Boring MW5 (Page 1 of 2)

<p>Project 2440 East Eleventh Street Oakland CA</p> <p>GPS Coordinates N 37° 46.812' W 122° 14.181'</p> <p>Location In parking lane, near north corner of 976 23rd Avenue</p> <p>Elevation Top of casing, north side = 19.06 (MSL datum). Ground surface = 19.71 (MSL datum).</p> <p>Drill Method and Rig Direct push for soil sampling, then overdrilled using 4.25-inch ID by 8.25-inch OD hollow-stem auger. Geoprobe 6610 rig.</p> <p>Sampling 60" long by ±1.5" ID, direct push macro-core liners. Samples collected continuously.</p> <p>Completion 2-inch diameter SCH 40 PVC well with traffic-rated utility box.</p>	<p>Address 2440 East Eleventh Street Oakland CA</p> <p>Logged By Jeremy C. Gekov STREAMBORN (Berkeley CA)</p> <p>Project No. P279</p> <p>Start 8:00 am, 28 Sep 2006</p> <p>Finish 11:00 am, 28 Sep 2006</p> <p>Driller Ernesto (driller). Precision Sampling (Richmond CA)</p> <p>Drilled Depth 17.0 feet</p> <p>Groundwater 11.28 feet (stabilized) 16 feet (during drilling)</p>
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Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	OVM (ppm v/v)	Soil Description, Observations, Comments
0.0							Hand auger drilling to 5 feet. Asphalt with underlying aggregate base.
1.0						Δ	Lean clay with sand (CL). Moist, dark brown. Low plasticity. <5% gravels up to 0.125-inch. <10% fine-grained sand. No staining, no odor.
2.0					60		
3.0		CL					
4.0							
5.0						Δ	Lean clay (CL). Moist, dark brown. Low plasticity. <10% fine-grained sand. No staining, no odor.
6.0							
7.0							
8.0		CL			60		
9.0							
10.0							

Boring MW5 (Page 2 of 2)

Depth (feet)	Graphic Log	USCS	Sample Interval	Blows per 6 inches	Recovery (inches)	OVM (ppm v/v)	Soil Description, Observations, Comments
10.0	[Diagonal hatching pattern]	CL	X			5	Lean clay (CL). Same as previous page. No staining, no odor.
11.0							
12.0	[Diagonal hatching pattern]	CL	X		60	15	Lean clay with sand (CL). Moist, brown. Low plasticity. <20% fine-grained sand. No staining, petroleum odor.
13.0							
14.0	[Dotted pattern]	GC	X			13	Clayey gravel with sand (GC). Wet, brown. Subangular gravels up to 0.25-inch. <25% fine- to medium-grained sand. <25% fines. No staining, petroleum odor.
15.0							
16.0					16		
17.0							Final drilled depth = 17 feet. The boring was completed as a 2-inch diameter monitoring well installed to 17 feet. Refer to the monitoring well completion schematic.
18.0							
19.0							
20.0							
21.0							
22.0							
23.0							
24.0							
25.0							

Equipment CME 75 Logged by K.Scheller

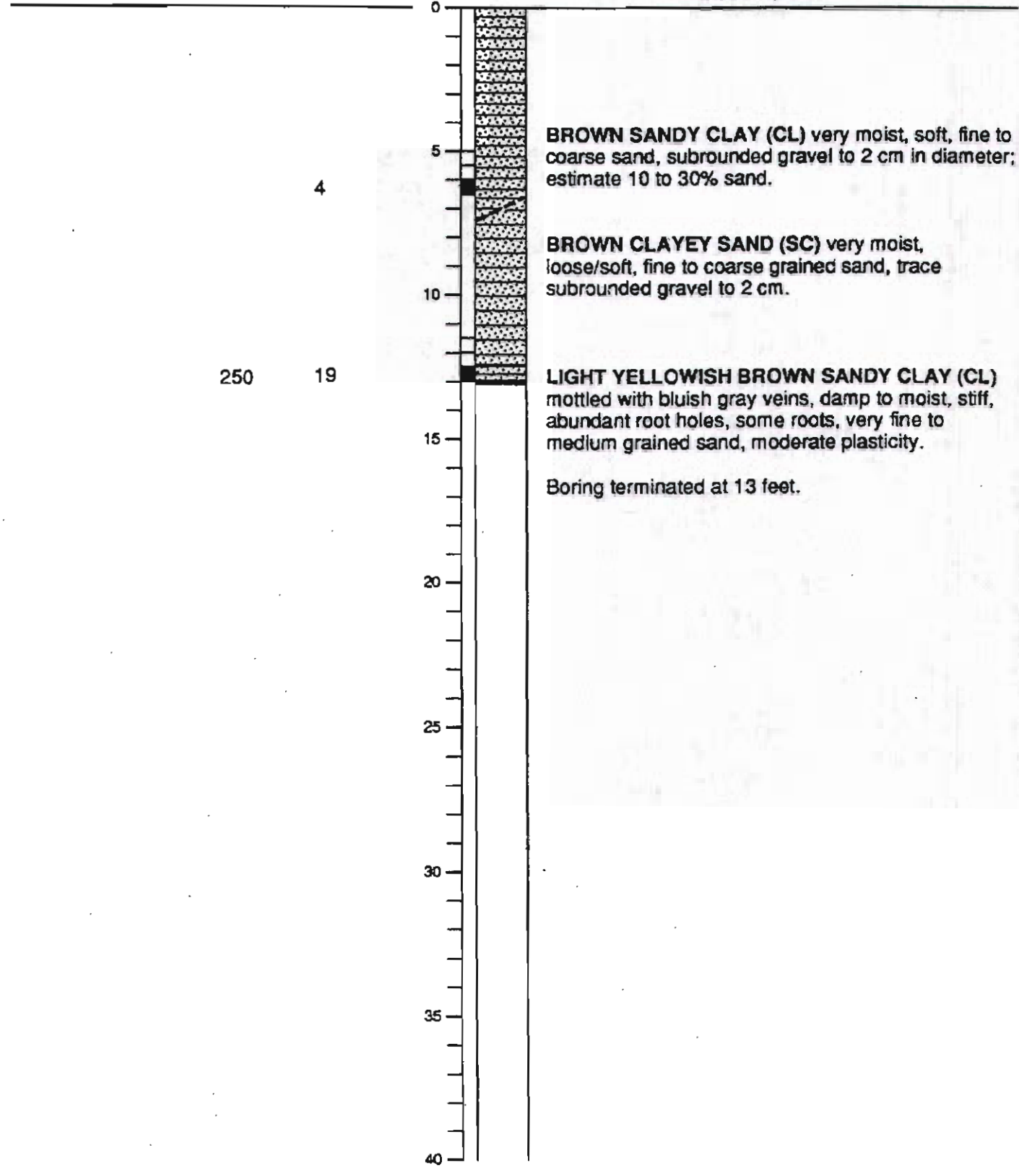
Land Surface _____ Date 10 Jul 95

Elevation _____

PID (ppm)
Blows per foot

Depth (feet)
Sample
Lithology

Description



Log of Boring E-1

EANDI Metal Works / Phase II
Oakland, California

PLATE
6

Equipment CME 75 Logged by K.Scheller

Land Surface _____ Date 10 Jul 95

Elevation _____

PID (ppm)

Blows per foot

Depth (feet)

Sample
Lithology

Description



LIGHT BROWN SANDY CLAY/CLAYEY SAND (CL/SC) moist to very moist, soft/loose, very fine to coarse grained, trace subrounded gravel to 2 cm diameter.

LIGHT YELLOWISH BROWN SANDY CLAY (CL) with bluish gray mottles, damp to moist, stiff, medium plasticity, very fine to medium grained.

Boring terminated at 13.5 feet.

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19



Log of Boring E-2

EANDI Metal Works / Phase II
Oakland, California

PLATE

7

PROJECT NO.
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Aug 95

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